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ORGANIC PRODUCE SUPPLY CHAINS IN INDIA: Organisation and Governance

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Preface

The Centre for Management in Agriculture (CMA) at the Indian Institute of Management, Ahmedabad has been actively involved in applied, policy, and problem solving research on management in agriculture and allied sectors since its inception. It has conducted studies on various aspects of the agricultural and rural economy like WTO related issues, food quality, contract farming, fisheries, agricultural marketing, marketing of agricultural inputs, forestry, irrigation, agricultural finance, dairying and rural development programmes. The research efforts span various functional areas of management like production, procurement, processing, marketing, strategy, and monitoring and implementation, including policy analysis.

It is always in the forefront to take up emerging issues concerning the agricultural sector. The present study by Dr. Sukhpal Singh 'Organic Produce Supply Chains in India' is in this genre. Organic products have emerged as an important niche market globally since the 1990s and more recently, in India. The organic produce sector (production and trade) is organised largely through supply chains which are global and national in scale. The supply chains have emerged as the very nature of organic market and production requires that the chains extend to the farm and primary producers. The organic produce sector is also being seen as an important component of sustainable agriculture from the policy and developmental perspective. Therefore, it is important to examine the nature and dynamics of the organic produce supply chains in India with a global perspective. It is this aspect of the organic produce sector that this study attempts to explore and examine.

It takes a case study approach and covers various sectors like cotton, basmati paddy and processed food products, with case studies of both export market driven and domestic market driven agencies. It examines the organisation of production and marketing in these products and analyses the problems being faced by various players in the chain especially primary produce suppliers and the Indian parts of the chain organisers. It supplements the agency level analysis with survey of primary organic producers in some crops. The major aspects addressed include participation of small and marginal growers, problems faced in this regard, certification, and marketing of primary growers' produce, pricing of the produce and role of various organisations, besides the issue of mainstreaming of organic produce.

Vijay Paul Sharma
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Agricultural development still remains at the centre of the overall developmental effort as vast majority of people still depend on agricultural and related activities for livelihood and income. The new economic environment has further necessitated that agriculture as a sector should not only sustain its own growth and development but also lead other sectors through new dimensions like agro-processing, agro-exports and other linkage effects. Organic produce has emerged as an important area of interest both globally as we all as a domestic policy option due to various problems in the conventional agro supply chains like chemical residues, environmental pollution, rising costs of cultivation and so on. This study examines the production, procurement and marketing aspects of the organic produce sector with focus on marketing agencies and producers in each commodity/product chain. It analyses the institutional arrangements (supply chain) prevalent in this sector. It analyses the problems in the producer-processor/marketer part of the organic produce supply chains in India; examines various backward and forward linkages and networks and their nature so far as producing farmers are concerned; and studies various institutional/organisational options for organic produce and market promotion. This study of organic produce supply chains is based on case studies of various types of players in India both in export market as well as in domestic market though the latter is just emerging.

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Sukhpal Singh

Chapter 1

Introduction

1.1. Introduction

The concept of organic farming originated in the U.K. in the 1930s and certified organic produce has been available since early 1970s (Browne, et al, 2000). World wide, about 130 countries now produce certified organic products on a commercial scale, with 90 of them being developing and within them, 15 being even least developed countries (IFOAM, 2000; Jha, n.d.; Raynolds, 2004). The organic crops cover an area of 22 million hectares world wide (Yussefi and Willer, 2003). Asia alone has 20 countries producing organic produce with 60,000 enterprises and 0.6 million hectares under it which is 15% of all farms and 2.6 of total area under organic farming worldwide (Raynolds, 2004). Organic standards apply both to crop and animal production and the processed foods. The principles of organic agriculture include concerns for safe food production, protection of environment, animal welfare, and social justice. Sustainability and organic farming are closely linked. In fact, organic farming is one form of sustainable agriculture with maximum reliance on self-regulating agro ecosystem (Browne et al, 2000). The National Organic Standards Board of the U.S.A. defines organic farming as an ecological production management system that promotes and enhances bio-diversity, biological cycles, and soil biological activity. The focus is on ecologically compatible production systems and processes, not on the product alone or specific inputs (Krissoff, 1998). Organic production is defined by USDA as follows:

'A production system which avoids or largely excludes the use of synthetic compounded fertilizer, pesticides, growth regulators and livestock feed additives. To the maximum extent possible, organic farming systems rely upon crop rotation, crop residues, animal manures, legumes, green manures of farm organic waste and aspects of biological pest control to maintain soil productivity and tilth, to supply plant nutrients and to control insects, weeds and other pests' (cited in Browne et al, 2000). Under the organic milk

farming system, disease free milch animals are given pesticide free feed and fodder. In the manufacture of organic dairy products, special care has to be taken to exclude artificial or chemical ingredients like colour, flavour, sweetness or stabilizers. But ,the USDA now has four categories of organic products i.e. 100% organic with all organic ingredients, organic (with 95% organically produced ingredients), made with organic ingredients (>70% organic ingredients with 3 major shown on the pack), and processed products containing less than 70% organically produce ingredients but they can not use the organic label. The first two categories can use the USDA Organic Seal on the packs (ITC, 2004).

1.2. Rationale for Organic Farming and Trade and the Global Context

High cost modern farming and its unsustainability due to overcapitalization and rising input costs has made organic farming a necessity in many agriculturally grown regions. Organic farming has been found to be as or more viable than conventional farming in the United States of America (USA) and the European countries due to either higher yield, or lower cost or higher market prices (Lampkin, 1994). Organic farming is not only financially less draining for the small farmer and good for environment (Setboonsarng et al, 2006), it also helps the government to reduce its subsidy bill meant for modern inputs (table 1). Food scares related to pesticides and animal diseases in conventional supply chains have also increased demand for organic produce (Harris et al, 2000).

The growing health and environmental concerns, and increasing non-tariff barriers like Sanitary and Phyto-Sanitary (SPS) measures in the international market which either shut the market or raise the cost of compliance (Naik, 2001) are major drivers of organic farming and trade globally. Table 1.1 lists major potential benefits of organic agriculture. Environmental concerns of consumers have led many NGOs, sellers, and governments to promote organic farming (Harris et al, 2000). The sustainability concerns at home in terms of diminishing returns from mainstream farming, and its effects on soil and water, are the other factors behind the move from chemical input based farming to organic production and consumption systems. Growing market is another important stimulant for

organic farming. In 2003, organic foods market was estimated to be of the order of US$ 25 billion (Yussefi and Willer, 2003). That the consumers are willing to pay premium prices for organic products ranging from 10-100% in countries like the USA and even in India is revealed by studies in the late 1990s (Lohr, 1998; Naik, 1999; Jha, n.d.). But, the existing supply chains catering to the conventional or mainstream agro produce have been found to be inadequate to meet this new demand as there have been serious problems like Genetically Modified Organisms (GMOs), chemical residues, and mad cow disease, eroding consumer confidence in these chains (Raynolds, 2004).

Table 1.1: Potential benefits of organic agriculture

Parameter	**Potential benefits**
Agriculture	Increased diversity, long term soil fertility, high food quality, reduced pest/disease, self-reliant production system, stable production.
Environment	Reduced pollution, reduced dependence on non-renewable resources, negligible soil erosion, wildlife protection, resilient agro-ecosystem, compatibility of production with environment.
Social Conditions	Improved health, better education, stronger community, reduced rural migration, gender equality, increase employment, good quality work.
Economic Conditions	Stronger local economy, self reliant economy, income security, increase returns, reduced cash investment, low risk.
Organizational/Institutional	Cohesiveness, stability, democratic organizations, enhanced capacity.

Source: Stoll, 2002 (original: Crucefix 1998).

Globally, it is argued that products which are not produced in the developed world or are off season or in shortage or novelty or specialty products can give potential export opportunity for the developing countries. It is also suggested that the developing world should get into the organic markets early, develop strong supply base, collaborate with counterparts, comply with standards and other legal requirements, choose the right distributor, stay up-to-date, develop the local market simultaneously, and partner with the agencies and organisations in market countries in production, processing and marketing (ITC, 2004). In other words, this means focusing on international or global business partnerships along the supply chain (Jha, n.d.). But, the challenge is to mainstream

production and trading opportunities to ensure the participation of large number of producers in developing countries in these markets, and to ensure that production and exports are maintained and expanded in the long run. It is argued that organic production is suited for small farmer participation as it is labour intensive and compatible with traditional peasant practices. But, export of organic products involves certification, documentation, record keeping and auditing which makes it industrial in nature and counters the traditional norms and practices of peasant producers. Also, price premiums are likely to decline as economies of scale are attained in marketing and the supply base expands at a rate unmatched by market expansion (Krissoff, 1998). It is only the fair trade and alternative trade networks which still provide some scope for participation of the small and marginal organic producers (Yussefi and Willer, 2003; Raynolds, 2004).

For small and marginal farmers, organics can be effective risk management tool that reduces their input costs, diversifies their production and improves local food security. For rural communities, it can provide improved incomes, better resource management, and more labour opportunities. It also meets the increasing demand for food safety and traceability for competitive international markets. For larger society and government, it reduces possibility of pollution, and environmental contamination due to less use of chemical inputs. For those involved in the organics sector, it earns more money (IFAD, 2005, p. xx).

But, in international markets, increasingly, organic trade and ethical and fair trade concerns are beginning to overlap (Raynolds, 2004). Where as ethical trade is people centred, environment focused and animal centred, the fair trade approach emphasizes partnerships with producers for improving the status of disempowered groups through alternative trading organizations. It works though Self Help Groups (SHGs) for provision of fair price to primary producers, with focus on gender equality, market access, and long term relationship (Tallontire, 2001). Fair trade concept was developed in Europe and fair trade organisations have become an important channel for a number of food products for which consumers are willing to pay a fair trade premium (Kortbech-Olesen, 2000). An increasing number of fairly traded goods are also organic (70%) and the organic

movement is moving towards including social rights and ethical trade in its standards. If there is consumer pressure for this overlap, then there would be considerable implications for the volume of trade, the developing country producers' ability to meet the requirements, and for the working conditions and livelihoods of producers (Browne *et. al*., 2000).

1.3. Organic Farming in India –Policy and Practice

There has been recent policy emphasis on organic farming and trade in India at various levels. The 10th five year plan emphasizes promotion of and encouragement to organic farming with the use of organic waste, along with promotion of Integrated Pest Management (IPM) and Integrated Nutrient Management (INM) (GOI, 2003). There are many state and private agencies involved in promotion of organic farming in India through subsidized dissemination of IPM, INM, Integrated Crop Management (ICM), and subsidy on biofertilisers and biopesticides, besides separate purchase of organic produce by some government agencies for export. These include Ministries of Agriculture, and Departments of Agriculture and Horticulture at the central and state level, universities and research centres, NGOs like Jatan, Vadodara, Morarka Foundation, Jaipur, and International Resources for Fairer Trade (IRFT), Mumbai, producer organizations like the Vidharba Organic Farmers' Association (VOFA) and the Tarai Organic Farmers' Association (TOFA), and certification bodies like Indocert and Ecocert besides various processors and traders. In 2001, a National Programme for Organic Production (NPOP) which aims at establishing national standards for organic products was launched. More recently, Indian Competence Centre for Organic Agriculture (ICCOA) has been proposed which will collect, analyse, document and disseminate information and knowledge on organic farming and build capacity of individuals and institutions besides advocacy, networking and consultancy services (Kumar, *et. al.*, 2003).

The central and state governments have also identified Agri Export Zones for organic products in particular in some states like Uttaranchal and Punjab. Products suitable for local production and processing have been identified and facilities and incentives are

being offered to encourage production and export of organic products in such zones. In UP and Uttaranchal, the Diversified Agriculture Support Project (DASP) is promoting organic farming practice where concepts like biodynamic farming, compost, vermiculture, cow pat pit (CPP), green manuring, biocontrol agents, ICM, etc, are being encouraged with technical support from the project (UPDASP brochure). More recently, the Sir Ratan Tata Trust has helped set up a Centre for Organic Farming (COF) in Uttaranchal. In Bangalore, Nilgiris, with 50 outlets in South India, sources organic produce from small growers which is supply driven (Chengappa *et. al.*, 2003). Similarly, IRFT, Mumbai, procures organic cotton and other agro products to sell them to Indian and foreign buyers as part of its fair trade policy to help the rural poor (IRFT, Mumbai, Annual Report, 2002-2003). There are many private companies like Ion Exchange, Mumbai which are into export and domestic marketing of organic produce.

On the production side, in 2003, there were 5661 certified organic farms and 41,000 acres under organic production which was only 0.03% of all agricultural land in India (Yussefi and Willer, 2003). Organic products produced in India include cereals especially rice (24% of total organic production), wheat (10%), spices (5%), tea (24%), coffee (4%), pulses (3%), cotton (8%), honey, jaggery, and fruits and vegetables (17%) (Garibay and Jyoti, 2005) and India is a key exporter of organic tea and spices (Raynolds, 2004). That organic farming in India is, most of the time, viable is brought out by many studies recently (Singh, 2003). Though 70% of the area in India is unirrigated, it is this area which is largely organic by default/tradition as no/not much chemical inputs are used. This traditional strength of Indian farmers in organic production in terms of non-chemical based farming practice makes it that much easier to focus on production and trade and benefit from growing organic produce markets. Further, there are three types of organic producers in India – traditional organic growers who grow for their subsistence needs by organic methods but are not aware of it which make up about 70% of the Indian farming; traditional organic producers supplying to the domestic market with mixed farming and who have adopted organic for reasons of concern for environment and sustainability; and commercial farmers who have surplus and export their produce through different channels. These also include private companies which either have their own farms or

organise large conversion programmes with growers (Yussefi and Willer, 2003; Jha, n.d.).

The hindrances to organic farming, in general, include high initial cost (15-20% higher than that in conventional farming), complicated production technology, alienation of farmers from the concept, lack of common standards and high cost of certification (5% of farmer sales), and lack of large market opportunities comparable to those for non-organic produce markets especially for all crops year round besides absence of separate public markets for organic produce. On the input side, the constraints include the lack of marketing and distribution networks for bio inputs, and strong presence of chemical inputs in the market and their promotion (Levin and Panyakul, 1993; Jha, n.d.; Raynolds, 2004). The lack of adequate availability of organic inputs is another concern for wide spread adoption of organic farming in India. But, this can be addressed by converting waste into wealth, by keeping a portion of the land for green manure along with regular crops, and by using social forestry for increasing biomass availability (Jha, n.d.).

1.4. Research Questions

There are many researchable questions in the organic produce market which are:

- What is the domestic and export market potential, and production and marketing constraints for organic products?
- Does the economics of production and marketing of organic produce suggest that it a viable option for small and marginal farmers?
- What are the costs and of certification of organic products, farms, and inputs and what measures are required to tackle the certification barriers and reduce costs of certification?
- What are the quality issues including harmonization of standards like the IFOAM, CODEX, and NPOP, and how quality can be improved?
- What should be the marketing strategies for organic products?
- What are the factors in success of organic product marketing enterprises and what lessons can be learnt from their experience?

- What should be the policy for promotion of organic production and markets?
- How to deal with the overlap between organic produce trade and ethical and fair trade issues in international markets?

In fact, the institutional approach to understanding the organic products sector, which defines institutions by their values, norms, practices, and rules, has not been attempted (Michelsen, 2002; Raynolds, 2004). Rather, organic produce trade sector has seen mainstream agro-industrial conventions like efficiency, standards, and price competitiveness which seem to threaten the very purpose of the sector itself. The organic movement was, to begin with, committed to domestic and civil values, rooted in personal trust, local knowledge, ecological diversity, and social justice. This has happened as organic produce is increasingly being traded through large conventional supermarkets to a significant extent in most of the western countries though natural food and specialty stores are another major source of supply besides direct sales. This has implications for the governance of international and domestic organic produce chains and supply networks. Further, though scholars and policy makes have remarked on the rising international organic trade, it has received little academic analysis. More recently, commodity chain or network approach had been used for analysing organic produce markets (Raynolds, 2004).

From a governance mechanism angle, within an organic commodity or product chain, the research questions are:

- how the organic produce chains are organized and managed?
- how do governance structures provide opportunities for product upgrading or create barriers to entry for players across the chain?
- how the benefits can be more broad based in the chain?
- what is the role of government agencies and other external forms of regulation in determining both product and process parameters in the value chain?
- to what extent, there is a trade off between co-ordination and control within the chain, and use of external agencies to certify/regulate firms?

- what are the power relationships and sources, forms, and levels of control within a chain? and
- how is surplus value/margins shared within the chain (Gibbon, 2001a; Gibbon, 2001b; Gereffi,2001a; Gereffi et al, 2001b; Kaplinsky, 2000; Ribot, 1998; Raynolds, 2004).

A network approach, which argues that market activities are never purely economic but are embedded in social norms and institutions which mediate their effects, appears critical in analysis of agro food commodity chains which are strongly influenced by consumer groups and deeply embedded in non-market norms such as socially and environmentally friendly food. There have been no studies on the ideas, practices, and institutions which comprise and coordinate the increasingly global organic agro food network (Raynolds, 2004, 729).

1.5. Objectives

This study examines the production, procurement and marketing aspects of the organic produce sector with focus on marketing agencies and producers in each commodity/product chain. It attempts to analyse the institutional arrangements (supply chain) prevalent in this sector. More specific objectives of the study are:

1. To analyse the problems in the producer-processor/marketer part of the organic produce supply chains in India;
2. To examine various backward and forward linkages and networks and their nature so far as producing farmers are concerned; and
3. To study various institutional/organisational options for organic produce and market promotion.

1.6. Methodology

The study makes use of the case study approach in understanding the processes and systems of organisation and management of the organic produce supply chains. Case studies have an advantage over other research method when a how or a why question is being asked about a contemporary set of events over which the investigator has little or no control. Also it permits the use of multiple sources of evident (Yin, 1994).

The study is based on case studies of various types of enterprises in selected commodity/product chains across the country. Given the significance of rice (esp. basmati for its export market dimension as well) and cotton in the organic basket of India, these two crops along with processed food products were selected for case studies and the enterprises studied include private firms (Pratibha, Agrocel, Satluj, IEEFL and Fab India), NGOs (Jatan and INHERE), individual growers and traders/marketeers (BKKF, Dubdengreen, Sresta, and Sanskruti), and government/development agencies/projects (UOCB and Chetna Organic). Further, the case studies cover both export market oriented as well as domestic market focused enterprises. The focus largely is on organised sector players, their marketing strategies, and backward linkages with farmers. The organic produce growers are linked with the market largely through private companies, traders/exporters, government agencies or NGOs. Therefore, the study, importantly, examines the profile and strategies of these types of enterprises to assess how far they can help the farmer link up profitably with the market. Case studies explore the nature and extent of linkage of the main players (processors/marketing agencies) with primary producers. They have been conducted with a semi-structured interview schedule. A survey of primary producers in some case study commodity chain to examine their role and place in the organic produce value chains was also attempted with the help of an interview schedule for individual farmers, farmer groups, and their organizations.

1.7. Chapterisation

The second chapter gives an exhaustive overview of the organic produce sector globally and in Asia for locating its spread and size. It also raises important issues in the process of review which are then addressed in the case studies to the extent relevant in each case. The third chapter gives and overview of the organic product and trade sector in India. The framework and issues in governance of organic supply chains are discussed in chapter 4. Then, chapters 5 examines the organization and functioning of organic cotton sector in India, with three cases of organic cotton supply chains being organised by a private textile firm (Pratibha Syntex), another private chemical/organic input and extension firm (Agrocel), and an international agency sponsored development project (Chetna Organic). This is followed by analysis of organic basmati chains (chapters 6) with case studies involving private firms (Agrocel and Satluj) and a government project (UOCB). Then, there are two case studies (chapters 7, and 8) on two processed food companies (export oriented IEEFL, and domestic market focused FabIndia). These also include case studies of individual players in domestic market (in Hyderabad and Gujarat). The next chapter (9) discusses the key issues like nature of contracts, grower participation, and certification from the governance angle. The final chapter (10) concludes the report with main findings, issues and some policy and micro-level suggestions for making Indian organic produce supply chains more robust and to make them deliver some development in the process.

Chapter 2

Organic Production and Markets: The Global and the Asian Context

2.1. Introduction

The principles of organic agriculture include concerns for safe food production, environment, animal welfare and social justice. Sustainability and organic farming are closely linked as organic farming incorporates human (social), economic and environmental aspects of sustainability (Lampkin, 1994; GOI, 2001; Michelsen, 2002). In fact, organic farming is one form of sustainable agriculture with maximum reliance on self-regulating agro ecosystem (Browne et al, 2000). The other alternatives include Low External Input Sustainable Agriculture (LEISA) and Integrated Farming Systems (IFS) (Lampkin, 1994).

The organic farming involves Integrated Pest Management (IPM) practices like use of bio-pesticides, bio-fertilisers and vermicompost. The other components of organic farming are crop rotation, intercropping, and green manuring (Rosset, 2000). It is also referred to as biological farming, regenerative farming, bio-dynamic farming, and low input sustainable agriculture (GOI, 2001), besides being known as traditional farming, permaculture, natural farming, and Vedic agriculture (Thimmaiah, 2005). Essentially, organic agriculture is one expression of sustainable agriculture. Sustainable agriculture pursues a similar agro-ecological approach, but without the guarantee system which is typical for organic agriculture. There are no standards in sustainable agriculture as in organic agriculture, synthetic external inputs are not explicitly excluded, but the priority is on making the best possible use of agro-ecological principles and local resources and using agrochemicals as a last option to save a crop. Developments in the field of sustainable agriculture are important for organic agriculture, as they are a very good starting point for conversion to organic status (Stoll, 2002).

The Codex Alimentarius Commission of the WHO recommends another definition of organic farming as “a holistic production management system which promotes and

enhances agro-eco system health, including biodiversity, biological cycles and soil biological activity" (GOI, 2001). On the other hand, IFOAM defines Organic agriculture as one that 'includes all agricultural systems that promote the environmentally, socially and economically sound production of food and fibres. These systems take local soil fertility as a key to successful production. By respecting the natural capacity of plants, animals and the landscape, it aims to optimize quality in all aspects of agriculture and the environment. Organic agriculture dramatically reduces external inputs by refraining from the use of chemo-synthetic fertilizers, pesticides and pharmaceuticals. Instead it allows the powerful laws of nature to increase both agricultural yields and disease resistance' (Stoll, 2002).

Major nutrient management techniques are preparation 500 (Cow Horn Manure), liquid manures, Cow Pat Pit (CPP) manure, biodynamic/Vedic Stem Paste, vermistabilization and biofertilizers. The Vedic organic preparation include: Panchagavya, Amrit Pani, Matka Khad, Kunakapajala, and different brews and teas made from locally available plants. Organic pest management involves any of the following: Liquid manures (tailor made), BD 501 (sudden shocks), Biodynamic stem paste, Peppering, Botanicals, and Biopesticides (Thimmaiah, 2005). The biocontrol agent include: *Trichogramma chilonis* (Sugarcane Internode borer), Bethylids, Branchonids and Eulophids (Coconut black headed caterpillar), NPV (Cotton Boll Worm), NPV (Groundnut red hairy Caterpillar and Prodenia), Green Muscardine fungus tubes (Coconut Rhinocerous beetle) and Bio-control agent crops (Cotton, Paddy, Pulses, Groundnut) (Vijayalakshmi, 2005).

This chapter reviews and examines the profile of the organic farming and trade sector in a global and Asian perspective. It profiles global production and demand scenario in the second section, western world of organic produce and their policies in this regard in section 3, the developing world organic sector in section 4, the certification issues in section 5, the issue of mainstreaming of organic produce in section 6 and the strategic issue of the link between organic produce movement and the ethical and fair trade movements in section 7 as they are similar in their objectives though there are certain conflicts in the way they are presently conducted.

2.2. Global Production of, Market for, and Trade of Organic Produce

Though organic products make up a minor share in the world market, they are the fastest growing segment in the global food industry. In 2003, the Europeans consumed half of all the organic products sold worldwide and one third of U.S. consumers bought organic products which comprised 2% of food market (Raynolds, 2004). Demand for organic foods in the USA, the Europe, and Japan is growing rapidly (20% per annum) though market shares remain quite small. During the 1990s, organic food sales in U.S grew at an average rate of 24% per annum. Although a quarter of the consumers in USA purchased organic foods, the market share was quite small (1 - 1.5% in 1996). The U.S. was the largest single country market for organic foods with sales worth $ 4.2 million in 1997. In some markets like Switzerland, Denmark and Austria, it accounts for more than 2% of the total food sales (Yussefi and Willer, 2003).

The other major markets for organic foods are Japan, Germany, China, France, the United Kingdom (UK), (7% of total food sales), Austria, Netherlands, Sweden and Denmark (3-4% of retail food market) (Thompson, 1998). In Denmark, in some products like milk, oatmeal and rye flour, almost 1/4th of the market was for organic (Vestergaard and Linneberg, 2004). In fact, in China, organic food accounted for 6% of total food sales in 1995 with no imports. On the other hand, in U.K., Canada, Germany and Netherlands, more than 60% of the organic foods were imported. The average retail premium in various countries ranged from a minimum of 12% in Australia to as high as a minimum of 30% in Canada and China. In fact, Canada and Australia were also very active exporters of organic foods to Asia, the USA, and the Europe respectively (Lohr, 1998). The EU had 2% of its total area and some other European countries even as high as 10% of their total area under organic production during the 1990s. By 1998, 1.7% of all farms and 2.2% of total farming area was under organic production in the EU. Some of the countries like Sweden and Austria had 15% and 9.6% of farms and 7.8% and 8.4% of all area respectively under organic production. On the other end were countries like Denmark with 3.5% of farms and 3.7% of area under organic production (Michelsen, 2002). The market for organics

was estimated to be between US$ 23-25 billion in 2003 (Yussefi and Willer, 2003) (tables 2.1 and 2.2).

Besides price, demographic variables such as age, gender, marital status, number and age of children, information availability about organic produce, availability, and education are important variables in explaining consumer demand for organic products. A typical organic buyer is young, female, single and professional and females are more likely to buy organic produce than males and younger consumers are willing to pay more for organic produce. Freshness also matters but if the buyers know about produce being organic, they still buy blemished produce (Harris et al, 2000; Tsakiridou, 2004; Tsakiridou, 2004). The place of purchase of food and habit persistence related to age and household composition are also important in understanding where potential growth in organic food might occur. With 40% of retail food expenses made on food away from home, it can also be an important determinant of demand for organic products (Thompson, 1998). For example, in the USA, 80% of all organic food sales were made by farmers to wholesale outlets, 13% directly to consumers, and 7% to retail outlets (Klonsky and Smith, 2002). In some countries like Germany, there are specialist organic retailers (1800 in early 1990s) who offer complete range of organic groceries (Tate, 1994). Thus, the major outlets for organic produce are producers themselves selling in local markets, health and natural food shops, specialised retail outlets, and supermarkets, the latter accounting for the majority of the organic sales but rely on imports (Baurakis, 2004).

The international organic produce trade has two patterns-The largest one is characterized by inter-core country trade dominated by U.S. export to Europe and Japan, trade between European countries, and export from Australia, New Zealand and South Africa to the top markets. The second strand is comprised of a south-north trade with growing number of production sites mostly in Argentina, Mexico and other Latin American countries which export to the major northern organic markets. This is the indicator of increasing social and spatial distance inherent in the global organic agro food system. The social movements and state actors have been as important as economic firms in fueling and regulating the south-north organic trade. There has been two parallel streams of global organic trade by way of certified organic routed in

efficiency, standardization, and price competition, and the alternative movement linked to trust, ecological diversity, and social justice (Raynolds, 2004).

Table 2.1: Estimates for organic market development in major markets

Country	Annual Growth rate percentage	Assumptions	Source
Australia	25	By 2015 organic products are expected to have a market share of 30%. Growth is simulated by demand overseas; Japan's recognition of the Australian certification NASAA is expected to boost Australian organic exports to Japan.	USAD (2000b) Asiarice 2001
EU	10-30	Market for products from developing countries such as nuts, spices, essential oils and other climate specific crops is large; value added processed food from countries with low labour cost should be developed for European markets.	ITC 2001 Harris and others 2001
Japan	15-20	1% of total domestic production / consumption is organic; 10% of the total market are imports; Vegetables constitute 53% of the total market, rice 24% and fruits 22%; Regulation of the organic foods inspection and certification / authentication system started April 2001; Japan has an equivalency agreement with the United States for mutual recognition.	USDA (2000e)
Republic of Korea		Consumers accept 50% higher prices; Local production increased between 1989 and 1998 by 1,740% (=1% of the total farm land)	USDA (2000c)
New Zealand		The New Zealand Government is working towards meeting future organic certification requirements of the EU and Japan for equivalency; Official certification programme set up in March 2001; 30% of consumption is imported from the United States, Australia, China, EU.	USDA (2000f, 2001a) Sutton (2000)
Singapore	25-30	Australia is market leader in fresh fruits and vegetables. United States is market leader for the other products.	USDA (2001d)
Taiwan Province of China	100	Within three years the market is expected to double; Production area doubled in the last two years to over 1,200 hectares	USDA (2000g)
United States	10-15	Market is expected to grow to US $ 12 million	ITC 1999

Source: Stoll, 2002.

Table 2.2: Regional shares (%) in total area under organic farming

Oceanic	48.51
Europe	23.58
Latin America	20.02
North America	7.42
Asia	0.33
Africa	0.14

Source: Stoll, 2002 (original Willer & Yussefi 2001).

In all countries, it was predicted that demand for organic products will further rise as also the number of organic retail chains but pricing for organic products will come closer to conventional equivalents. The major buying motive for organic buyers in future will be 'healthy eating' and flavor of organic produce. The US market for organic goods has grown in the absence of national governmental standards/regulation and labeling laws. But, premiums, and sales prices of organic are falling. Thus, the growth in the market will be driven by three major factors:

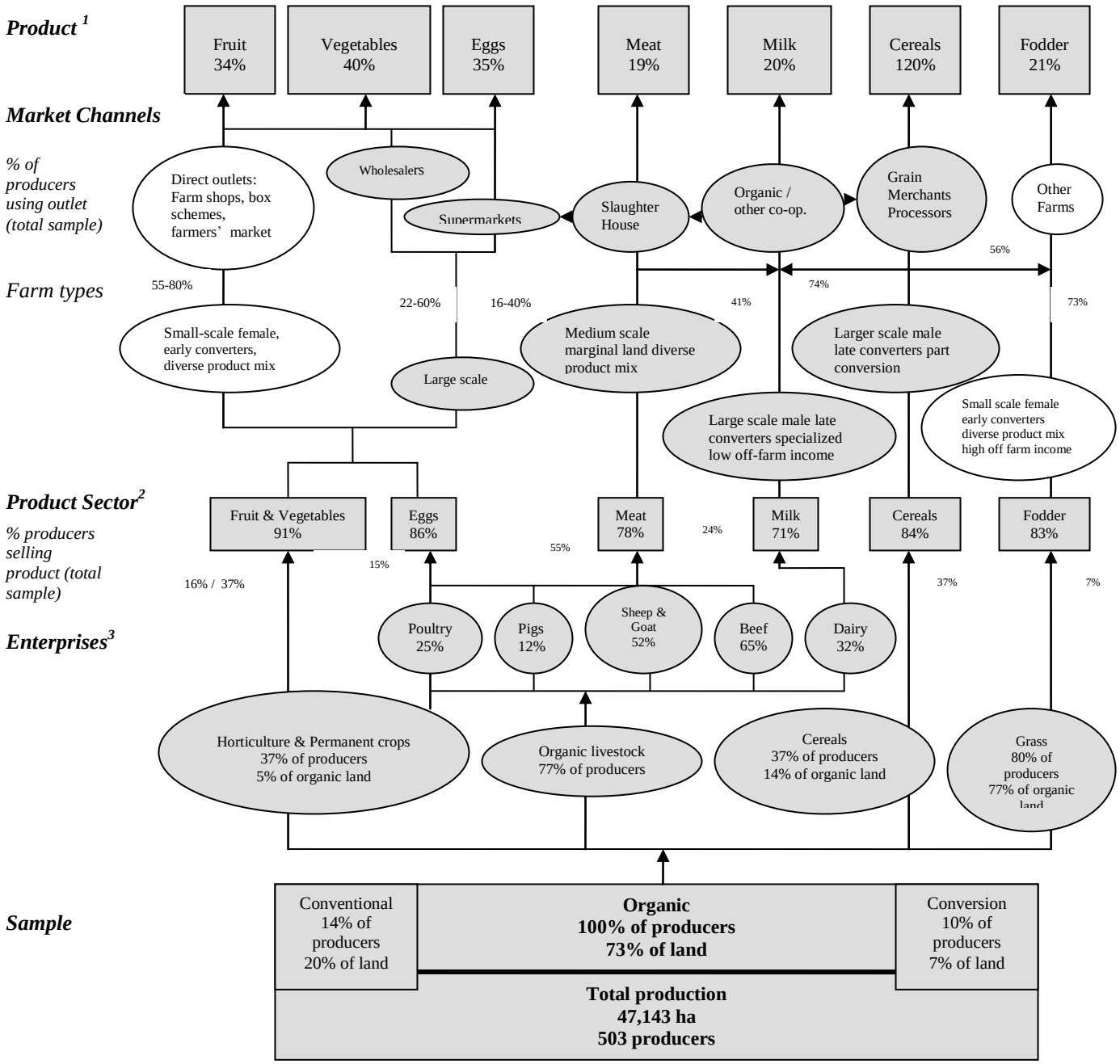
1. More and more conventional retail chains will enter into the organic market.
2. The distribution density and the range of organic products in the outlets will increase.
3. The buying frequency of existing and future consumers will increase. This reflects the availability and visibility of organic goods in more outlets, therefore, raising the ease of access to such products by consumers. Despite some common perceptions to the contrary from the organic responsible people in some retail chains, there may be a supply deficit in organic goods in the medium term (Ritcher et al, 2005).

2.3. Organic Sector Growth and Government Policy in the USA and the EU

These two regions together accounted for 95% of the total world retail sales of organic food products in 2003. The retail sales of organic products were 9966 million Euros in EU and 8029 million Euros in the US in 2003, accounting for about 1-1.5% of total food sales in both the regions with the share going upto 3% in some EU countries and even being as low as <0.5%. The premiums ranged from 20-182% across products in 2002 in the EU and the organic farmers in the US got premiums for at least half of their produce while 45% sold it as conventional produce with some selling there due to lack of organic market, and some even sold at lower prices in 2001. The promotion policy for organic agriculture differs in the two regions. The EU-15 had more certified organic farm land (5.1 million hectares), 23% of the world's organic farm land (with Italy alone taking 20% of the total EU organic acreage) compared with only one million hectares in the USA, a greater share of farm land under organic management (4% versus 0.5%) and more number of organic farms (143,607 against 6949 accounting for 2% and 0.3% of total farms and 3.9% and 0.3%

of total farm land respectively) in 2003, despite the fact that the US had three time as much agricultural land. Figure 1 gives a complete picture of the organic sectors and products along with premiums received in the UK.

Whereas the EU (other than UK and France) actively promotes organic sector growth by giving conversion subsidies and direct payments to farmers (where a farmer enters into a five year contract with a government agency for organic farming practices), the USA largely takes a free market approach and only facilitates market development. That is why the there are much higher rates of conversion to organic in Europe than in the US (Barkely, 2005). The share of organic land in such policy support programs varies from 33% for France and 113% in Sweden with EU average being 62%. The more recent policy of the EU on agriculture (EU action plan for Organic Food and Farming adopted in June 2004) focuses on information led development of the organic food market, more coherent measures and improving the EU standards. The reasons for different policy approaches may be due the different ideas about agriculture, environment, extension, and organic agriculture in the two regions' governments. In EU, many governments look at agriculture for its environmental value, social and other benefits and organic agriculture is viewed as an infant industry which needs support until it matures and becomes capable of competing internationally. On the other hand, in the US, it is considered as an expanding market opportunity for producers and the government regards organic food as a differentiated product available to consumers. In fact, the US, once an exporter of organic products, imported an estimated $ 1.0-1.5 billion in organic food in 2002 and the ratio of imported to exported organic products was about 8:1. To begin with, both in the EU and the US, the organic growth was supply driven but now it is consumer demand driven due to reasons like food scare in the EU countries, EU consumers' perceptions on GM foods, and more recently, other factors like health and nutrition, taste, food safety and environment which will sustain the market in future. But, still there are barriers to further growth of the market like price, availability, lack of distinguishable quality, and doubts about the organic integrity of the products (Dimitri and Oberholtzer, 2005).



[1] *Percentage added value (price premium received *percentage sold as organic)*
[2] *Percentage sold as organic*
[3] *Percentage of organic livestock*

Fig. 1: Production sectors, outlets and the value added in the UK organic products sector (Source: Holt et al in Baourakis (2004), p.146).

Major channels for organic produce (grains and oilseeds) from the farm in the USA are:

Farmer-co-operative-cleaner-manufacturer-distributor
Farmer-cleaner-manufacturer-distributor
Farmer-co-operative-cleaner-broker-manufacturer-distributor
Farmer-marketing agent (contracts with farmers and cleans)-manufacturer-distributor
Farmer-co-operative-processor of feed grain-distributor-livestock producer
Farmer-processor of feed grain-distributor-livestock producer

Source: Revoredo, 2004.

Developing organic markets with the purpose of adding more economic value to the crops, which are already cultivated close to organic standards, meant the producers and NGOs had to comply with the rules and regulations of the guarantee system which had been developed originally by IFOAM as a private sector body and later on regulated at government level first by the EU, then by the United Status and the United Nations (Codex Alimentarius) for the international trade (table 2.3). Essentially, today the organic market is a clearly differentiated market and is the only agricultural niche market that is defined by law (Stoll, 2002).

2.4. Organic Production and Marketing in the Developing World

Organic farming is practiced in almost all countries of the world and its share in agricultural land and farms is growing with total organically managed area being more than 22 million hectares world wide with major part of it being in Australia, Argentina and Italy (Yussefi and Willer, 2003). Now, there are 90 countries producing organic commodities for commercial scale with more than 20 in Asia and equal number in Latin America (23) and Africa and Middle East (AME) (18) each with thousands of enterprises (60, 000 in Asia, 1.1 lakh in Latin America and 57000 in AME) producing variety of crops and agricultural produce over lakhs of hectares (Yussefi and Willer, 2003). Four main crops have dominated the organic trade from developing countries to date: coffee, cocoa, tea and cotton with spices, herbs, fruit and vegetables following (Stoll, 2002). Asia alone has about 6,00,000 hectares under

organic production which accounts for 2.6% of all organic area world wide and 15.1% of all organic farms world wide.

Table 2.3: Labelling of Consumer Product Packages in EU and the USA

Labelling Category	***Principle display Panel***	***Information panel***	***Ingredient statement***	***Other package panels***
"100 percent Organic" (Entirely organic; whole raw or processed product)	"100 percent organic" (optional) USDA seal and certifying agent seal(s) (optional)	"100% organic" (optional) Certifying agent name (required); Business/Internet Address, tel. (optional)	If multi-ingredient product, identify Each ingredient as "organic" (optional)	"100% percent organic" (optional) USDA seal and certifying agent seal(s) (optional)
"Organic" (95% or more organic ingredients)	"Organic" (plus product name) "X% organic" (optional) USDA seal and certifying agent seal(s) (optional)	"X% organic" (optional) Certifying agent name (required); Business/Internet Address,(optional)	Identify organic ingredient as "organic" (required if other organic labeling is shown)	"X% organic" (optional) USDA seal and certifying agent seal(s) (optional)
"Made with Organic ingredients" (70 to 95% organic ingredients)	"Made with organic (ingredients or food group(s)" (optional) "X% organic" (optional) Certifying agent seal of final product handler (optional) Prohibited: USDA Seal	"X% organic ingredient" (optional) Certifying agent name (required); Business/Internet Address, tel.# (optional) Prohibited: USDA Seal	Identify organic ingredient as "organic" (required if other organic labeling is shown)	"Made with organic (ingredients or food group(s)" (optional) "X% organic" (optional) Certifying agent seal of final product handler (optional) Prohibited: USDA Seal
Less-than 70% organic ingredients	Prohibited: Any reference to organic content of product Prohibited: USDA seal & certifying agent seal.	"X% organic" (optional) Prohibited: USDA seal & certifying agent seal.	Identify organic ingredient as "organic"(optional) Required if % organic is displayed.	Prohibited: USDA seal & certifying agent seal.

Source: Arvanitoyannis and Krystallis in Baourakis (2004), p.71.

India had 41, 000 acres under certified organic farming which was only 0.03% of all agricultural land in India in 2002 (Yussefi and Willer, 2003). An IFAD estimate for 2004 puts the certified organic acreage at 2.5 million hectares and reports that 332 certifications were issued in 2003. Further, 31 organic products were exported from India in 2003 (IFAD, 2005). And, there are global commodity chains and networks in organic trade as well which are largely driven by buyers and certification agencies (Raynolds, 2004). Most of the time organic policies in the southern countries attempt to secure a place for traditional exports in the face of increasingly competitive international markets, offsetting the declining prices for primary exports by taping lucrative new markets, and preserving foreign exchange by reducing imports of expensive agro chemicals (Raynolds, 2004).

The growth of organic farming in India and other Asian countries has been slow due to the emphasis given to food security rather than food safety and poor marketing. For example, most of the organic food retailers are located in urban areas and are poor in availability of organic produce, inconsistent in supplies but charge exorbitant prices while at the same time suffering from poor consumer understanding of the organics (IFAD, 2005). This is in contrast to the growth of organic farming in Latin American countries where it was encouraged by increased opportunity for export of organic products (Naik, 1999) or in Cuba where a crisis (of the fall of the Soviet Union in 1989 and the economic sanctions against Cuba by the USA for 30 years) was converted into an opportunity through shift to organic farming which meant bio-pesticides (microbial products) and natural enemies to combat insect/pest atttacks, crop rotations and microbial antagonists to combat plant pathogens, better rotations, and cover cropping to suppress weeds.

Synthetic fertilizers were replaced by biofertilisers, earthworms, compost, other organic fertilizers, natural rock phosphate, animal and green manures. In place of tractors, for which fuel, tyres, and spare parts were largely unavailable, there was a sweeping return to animal traction. The main pillars of this transformation in Cuba were: agroecological technology instead of chemicals; fair prices for farmers; redistribution of land turning state farms into Basic Units of Cooperative Production (UBPCs), a form of worker-owned enterprise (known as the ‘linking people with the

land' campaign); and greater emphasis on local production. Due to this shift to organic farming, Cuba now has eleventh position on Physical Quality of Life Index (PQLI) (with the USA being at the 15th position), and the Right Livelihoods Award (alternate Nobel Prize by Swiss Parliament) has been given to Cuban Organic Farming Association (Rosset, 2000).

But, within Asia, China's case is interesting which has moved from Ecological Agriculture program to Green Foods to Organic Agriculture quite impressively during the last two decades, starting with ecological agriculture policy during the 1980s which was promoted under the National Environment Protection Agency (NEPA). Ecological Agriculture was successfully adopted by a number of villages during the 1980s and the early 1990s some of them winning international awards. But, it did not move beyond these model villages due to administrative, financial, institutional and market reasons as it lacked incentives for farmers to adopt it. On the other hand, Green Food movement started by a few individuals did much better as it was product focused as against the process focus of the ecological agriculture program. The GF movement focused on ends rather than means though the process was not very different. There was also better market focus with standards and labels being floated which helped get premium prices. It also got recognition from IFOAM soon after which it formed standards for green food which were basically two- one representing restricted use of agrochemicals which is mostly sold in domestic market and the other fully organic production which is also exported. By 1997, there were 892 green food products produced by 964 enterprise with a total production of 6.3 million tones over an area of 2.13 million hectares. By the end of 2000, the number of green products reached 1831 and output and area 15 million tones and 3.33 million hectares respectively. By 2005, it was difficult not tot come across green foods while shopping as it had spread to every province or autonomous region in China. Most of it was achieved through town and village enterprise (TVEs) esp processing and trading. On the other hand, organic agriculture originated in China only by the mid 1990s when only six products were certified over an area of 71000 mu and output of 3.876 tonnes. But, this increased to 107 products, 2,51,609 mu area and 74.51 tonnes of produce. Most of it was achieved by growers working with companies, NGOs and Co-operatives and no farmer sold his output individually to processors or supermarkets or

traders without some form of intermediation which signifies the role for institutional arrangements in organic agricultural development (Sanders, 2006). In 2004, China had 6-7 lakh hectares of certified organic farms and 1100 companies and farms were being certified (IFAD, 2005).

More recently, in Thailand, organic rice farming has been found to be more profitable for the growers under contract farming situation which was largely due to higher prices received in international markets through fair trade route (Setboonsarng et al, 2006).

2.5. Certification of organic produce

Certification is a procedure by which the third party provides written assurance that a product process or service conforms to specified standards on the basis of an order conducted to agreed procedures. Market based certification instruments presume that consumers are wiling to reward producers superior practices with price premium or improved market excess (Bass, 2001).

Certification of organic products has emerged as an important issue in their marketing. Certification not only assures consumers that a product that is not observably different from non-organic food was grown, processed and packaged according to rules that limit or ban synthetic inputs and that protect the environment, and assures producers that unscrupulous use of the term 'organic' does not defraud them of price premiums and market shares (reduces transaction cost for buyers), it also makes the market more efficient by reducing information asymmetry along the marketing chain. The advantages of certification for producers are:

i. The organic certification system helps the farmers to have effective planning of production schedules which can increase viability of farms.

ii. The certification systems can enable farmers to have appropriate accounting of their resources and lead towards efficient resource allocation and management.

iii. Inspection and certification are important educational tools for farmers for achieving improved levels of environmental standards including biodiversity conservation.

iv. Certification leads to product differentiation of organic products and facilitates a special market for product and services with premium prices.
v. Certification gives greater self- esteem and confidence for the farmers.
vi. Community based certification programmes can bring about several outcomes and consolidated actions for poverty alleviation.
vii. Community based certification programmes can result in increased levels of rural employment.
viii. Data gathered through certification programmes can provide useful inferences for shaping public policy.
ix. Certification and quality guarantee of the production systems can help the farmers to improve their access to credit facilities and other benefits from public policies (Daniel, 2005).

On the other hand, certification alienation:

- closes one of the main doors of opportunity to gain premium prices and improved incomes and better livelihood situations.
- limits opportunities of making small farms viable.
- reduces the chances of reaching markets.
- undermines the self-esteem of traditional farmers (Daniel, 2005).

But, it can be very costly for governments to set domestic standards for organic foods if only a few crops are grown organically and volume traded is small. In such situations, private certified bodies fill the void (Lohr, 1998). About 60 countries have already implemented or are in the process of implementing organic standards. For most producers, Europe and the US are the main target markets; hence their products need to comply with the Regulation (EEC) N° 2092/91 on Organic Production. The American National Organic Program (NOP), though not yet fully operational, does not exceed the European requirements. Thus, certification according to Regulation (EEC) N° 2092/91 is usually a sufficient basis for acceptance in the US. More difficult is the situation in Japan, where the organic certification procedures differ quite substantially and therefore require special re-certification procedures.

In the USA, where a minimum of 95% of the ingredients are of certified origin, products may be labeled “certified organic”. Where less than 95%, but not less than

70% of the ingredients are of certified organic origin, products may not be called "organic, but may be used in statements like "made with organic ingredients" (Revoredo, 2004). This is similar to NPOP standards in India. The table below (2.4) shows the conversion period for organic production for two types of crops.

Table 2.4: Certification stages for organic production

Year	Label/ Status
1	No label
2	In-conversion to organic
3	Certified organic (for annual crops)
4	Certified organic (for perennial crops)

The EU labeling of organic products is governed by the EU regulation 2092/91 of 1993 and of organic livestock under regulation 1804/99 enacted in 2000. The EU recognizes a national authority for each member as the body that can certify organic products as per the EU law. These bodies in turn approve other private agencies for certification. The requirements for organic certification are detailed in the legislation that is used as the basis for certification. In summary, the main requirements of Regulation (EEC) N° 2092/91 for producers of agricultural crops are:

- Soil fertility has to be maintained via crop rotation, adapted cultivation techniques and nutrient cycles.
- Pest attacks must be minimised by means of healthy soil, natural enemies and adapted crop varieties. Only those farm inputs (fertilisers, pesticides, etc.) that are listed in Annex II of the Regulation (EEC) N° 2092/91 may be used in organic farming.
- Only certified organic seeds should be used.
- All farm (or processing) activities must be documented at every stage, to ensure full traceability of product flow.
- Conventional units must be clearly separated from organic units and the same product must not be produced in both units. Conventional and organic products must not be mixed at any stage.

- Farms converting to organic farming have to undergo 2 (annual crops) or 3 years (perennial crops) of transition period. After the first 12 months, the products can be marketed as 'organic in conversion'.
- Organic products need to be labelled as 'organic' or 'organic in conversion' throughout the whole chain of harvest, transport, storage, processing, and export.
- Specific requirements apply for organic livestock and honey production.
- Every farm, processor or exporter producing or handling organic produce needs to be inspected and certified once a year by an accredited certification agency.
- In processing, only auxiliaries and additives listed in Annex VI of the Regulation (EEC) N° 2092/91 are permitted.

The USA has implemented the USDA National Organic Standards (NOS) since October 2002 and federal system still relies on multiple certifiers to certify producers and handlers of organic products (Dimitri and Oberholtzer, 2005). Japan has Japanese Agricultural Standards (JAS) since 2000.

In addition to this compulsory certification according to official organic legislation, there are wide ranging private organic label schemes all over the world. As most of them are owned by organic farmer associations and existed well before the regulations came into force, consumers in some countries tend to have higher confidence in these traditional labels, so they can be of considerable importance for marketing in certain regions (examples are: Demeter, Naturland (D), Soil Association (UK), Bio Suisse (CH)). Which private label will best support marketing efforts highly depends on the target markets and is best discussed with local trading partners. However, it has to be understood, that a number of these standards exceed the EU-Regulation in certain aspects of the production system.

Although organic standards, both official and private, are generally based on the 'Basic Standards of IFOAM (the International Federation of Organic Agriculture

Movements), individual deviations and differences have to be carefully evaluated and taken into account. IFOAM promotes the codification of formal written standards which restrict organic practices in accordance with the generalized rules rather than socio- ecological sustainability criteria. Also, it upholds rigorous third party monitoring which enforces uniform practices across organic networks and elevates industrial claims of scientific measurement and objective oversight over domestic forms of network coordination based on trust and local knowledge. Finally, it extends traditional, conventional, by promoting the superiority of certified organic labeled products over all other foods, cementing a singular organic supply chain which can be advertised to capture price premiums and market shares. But, IFOAM standards encompass environment, social and economic aspects unlike the CODEX, JAS and NPOP (Raste, 2004). CODEX standards which largely follow the EU and IFOAM specifications, promote technical production norms and industrial verification procedures by defining organic as 'a labeling term that denotes products that have been produced in accordance with organic production standards and certified by a duly constituted certification body or authority'. This definition ignores the organic movement's civic and domestic principles and affirms the position of commercial and industrial conventions in shaping global organic norms, enterprises and exchanges (Raynolds, 2004). The other difference is that whereas IFOAM standards were driven by NGOs, producers, consumers, Small and Medium Enterprises (SMEs) and value chains (45% of its members are from the south) though the participation from the south has been low due to various reasons, and CODEX was a joint venture of FAO and WHO, others i.e. JAS, EU, NOS, and NPOP owe their origin to respective governments. Also, decentralization of conformity assessment in the IFOAM system wherein certification bodies work through local agencies and auditors lowers costs and IFOAM also permits small holder group certification (Raste, 2004) under which it has developed more appropriate and cost effective procedures for the inspection of small farmers' groups which are in compliance with the IFOAM Accreditation Programme. These are based on:

- Internal control by the local organization
- Evaluation of the internal control system
- Random inspection by an external certifier

Capable individuals are identified and trained to become qualified Inspectors able to assist officially recognized EU inspectors. These local inspectors are entrusted with the inspection of every one of the small farmers' units according to the EU Regulation 2092/91. Every organization is obliged is obliged to develop internal standards for organic agriculture applicable to the crops cultivated and in compliance with EU Regulation 2092/91, and to pass these on to all its members farming organically (table 2.5). Using this approach, many production cooperatives established economically viable quality control systems, with the added benefit of supplying data for statistical purposes and eliminating any initial weaknesses. With an internal control system that is externally evaluated, the cost of certification can go down to 1-2% of production costs. In practice, the system has proved itself. The EU is currently developing group certification guidelines. Provided the internal control system functions satisfactorily to them, then organic inspection is reduced to an audit of the system with only 10-20% of the farms in the group being inspected externally every year. The group pays one fee for certification, making this an economically viable way for resource-poor farmers to get organic certification for their produce (Stoll, 2002).

Table 2.5: Number of import authorizations under Regulation (EEC) 2092/91

Country	No.	Country	No.	Country	No.	Country	No.
United States	337	Tunisia	20	Guinea	6	Tonga	2
India	115	Columbia	19	Cameroon	6	Papua New Guinea	2
Mexico	113	Burkino Faso	19	Togo	5	Nepal	2
Sri Lanka	103	Costa Rica	15	Thailand	5	Cote d'Ivoire	2
China	61	Tanzania	13	Philippines	5	Comoros	2
Brazil	56	Chile	13	Malawi	5	Myanmar	2
South Africa	51	El Salvador	11	Ghana	5	Seychelles	1
Guatemala	36	Zimbabwe	10	Ethopia	5	Namibia	1
Bolivia	35	Uganda	10	Mauritius	4	Jamaica	1
Peru	34	Indonesia	10	Cuba	4	Guyana	1
Madagascar	34	Nicaragua	9	Zambia	3	Gambia	3
Egypt	33	Honduras	9	Vietnam	3	Gabon	1
Dominican Republic	32	Ecuador	9	Vanuatu	3	Cape Verde	1
Paraguay	27	Pakistan	7	Kenya	3	Belize	1
Morocco	25	Sudan	6	Uruguay	2		

Source: Stoll, 2002 (original: Harris and others 2001).

Certification issues

Different standards being used by countries importing organic products have also become a new trade barrier for organic product exporters and producers as seen in the case of organic tea exported from India. This led to higher costs and losses for all involved i.e. importers, certifiers, producers, and government agencies, due to the incompetent handling of information in the chain (Bachi, 2003).

But, the certification standards and procedures have their northern origins and are difficult to maintain under southern conditions because they fail to address tropical agro ecological realities, the farmers cannot maintain farm level records due to illiteracy, and farm inspections are expensive as farmers have small disperse an unmapped holdings. Despite the IFOAM developing an ICS for small scale producer groups which makes use of local teams to communicate criteria, assist in record keeping and do yearly plot inspection, and are monitored by accredited certifying agencies to oversee local controls and annual spot visits to a sample of parcels, still certification costs represent 5% of farm sales. Due to this, despite the affiliation between peasant farming practices and those of organic farming, large scale commercial producers benefit from important socio-economic advantages in producing certified commodities. As a result organic, like conventional agriculture, appears to involve a large number of small farms and a small numbers of large corporate enterprises. For example, in Argentina, the largest 3% enterprises control 23% of its organic acreage (Raynolds, 2004).

Confidence and trust are essential market sentiments to be established between alterative marketing / trade operators and consumers. Credibility is particularly crucial when promoting additional values in a similar product category. How do labels guarantee the organic values claimed with their products? Claims are assessed against standards set by the government that are mandatory for export. Organic quality cannot be fully verified through product testing, for example, residue testing. It is not just the product, but also the farming or processing method that is certified. Certification of organic production includes three components.

- The producer, fields and facilities used in the production, including the producer's motivation, understanding of requirements and production units.
- The production system (farming and processing methods) including precautionary measures taken to protect the integrity of the production system, for example, transport documentation, audit train, correct labelling.
- The products themselves labeled with the mark of the certification programme or trade transaction certificate (Mahale, 2002).

2.6. Mainstreaming of organic produce

It has been argued that growth in organic food sales might be highly dependent on the ability of the industry to bring to market a consistent supply of diverse food products marketed by large-scale supermarkets which are becoming a major channel all over the world (Harris, et al, 2000; Haest, 2003). In fact, major UK retail chains like Safeway, Asda, Sainsbury and Tesco started organic food sales in the 1980s itself. But, there was mistrust between organic producers and supermarket chains on the very ethics of organic agriculture as producers perceived supermarkets to be expensive, wasteful, and only profit driven (Tate, 1994). Further, in the 1990s, retail produce managers, including supermarket chains, were not very enthusiastic about organic produce as were consumers, due to higher prices and higher costs of dealing in them, which became a limiting factor on the supply side and made the organic market highly fragmented with large variations in supply and prices across products and markets. Thus, lack of information and limited availability were major limiting factors in increasing organic consumption. Even higher prices and higher costs of dealing with organic produce (quality, taste, keeping quality, and freshness) depressed demand. A premium beyond 20% seemed to depress demand for organic produce (Harris et al, 2000).

Once supplied only by alternative movement venues such as farmers' market, Box Schemes and small food cooperatives, organic products have made major inroads in conventional distribution channels i.e. super market chains and institutional suppliers due to their popularity and substantial price premium (20-40%). In fact, in the U.S., conventional super markets now account for one third of the U.S. organic market. On the other hand, in Europe, small alternative shops handle 96% of the organic sales in

Netherlands and farms stalls and box schemes account for one fourth of the Germen organic market. Here too, super markets dominate organic sales in Switzerland, U.K. and Denmark (Raynolds, 2004).

The organic market, initially led by producers and traditional organic communities is gradually being dominated by large and vertically coordinated supermarkets, in terms of market share and ownership of top brands. Supermarket sales of organic produce amount to 40% in Germany, 49% in the United States of America, 80% in Argentina and the United Kingdom, and 85% in Denmark. Natural food supermarkets are rapidly growing: Whole food is the largest chain in terms of sale, with 140 stores and US$2.7 billion in the United States. Most large food companies have acquired organic brands and small firms, set up partnership with organic companies, or have their own organic lines: Cadbury Schweppes (organic juices), Coca Cola (acquired Odwalla Organics), Danone, Dean Foods, Dole, General Mills, Heinz, Kellog, Kraft, Mars, Parmalat, Sara Lee, Tyson Foods (organic meat). Mergers and acquisitions of organic brands and companies impact production, processing, certification and distribution pathways: in California, 2% of organic growers represent 50% of organic sales; Coleman owns half of the United States' organic pastures; Hain-Celestial is the world's largest processor of organic foods (annual revenues of US$400 million); Tree of Life is the world's largest organic food distributor (US$3.5 billion of sales); the Hein-Heinz partnership has 71% of the global market share of organic baby foods. This industry concentration sets prices, limits farmers' return, leverages supply and controls market access: In 2001, Horizon Organic reported a 200% increase in profit (net sales US$160 million) but actually cut contractually-promised premium to farmers after it bought out the Organic Cow of Vermont, decreasing farmers' income by US$15 000 per family. Currently, in the United States, the food industry pressure on the Government is threatening national organic standards (with proposed modifications on synthetic substances, animal feed and commercial availability of organic ingredients without public review). A reality today is that "demand" is driven by big retailers with brands that dictate standards and a market economy which is anything but transparent (Scailabba, 2005).

The retail chains in US and the EU countries adopted three types of **strategies** for the promotion of organic produce.

1. Maximum strategies.
2. Basic strategy, and
3. Minimum strategy

The **maximum strategy** involves expanding the range of organic goods beyond 400 articles which includes mainly comprehensive assortment of dry products, convenience products, fruit and vegetables, milk, cheese and meat. These retail chains frequently make their organic commitment a significant part of their advertising and promotional campaigns, and have educated and professional staff. The impressive buying atmosphere (friendly sales staff, sufficient space for relaxed shopping, generally attractive product presentation - above all in the fresh product range) of these chains attracts more number of customers and high turnover.

The **basic strategy** involves settling on a range of approximately 50-200 organic non-perishable (staple) goods combined with low price policy. Often milk and bread prices were lower compared with other organic products to attract customers to the organic range. These chains have sales volumes but mostly low levels of staff involvement and commitment and, therefore, low levels of customer assistance. In relation to marketing, a key success factor in the basic strategy is to replicate those instruments that work in equivalent conventional offerings (e.g. trend products such as convenience or frozen goods) or to adopt successful parts of the competitor's strategies. Frequently, the main suppliers give marketing assistance, so that the organic product management within the retail chains can be kept lean.

The **Minimum** strategy is used by conventional supermarkets neither having familiarity with, nor any significant commitments to, organic foods. The range is usually less than 50 items made up of dry products (such as tea coffee, breakfast cereals), hence minimizing the staff commitment to the organic product range. Given the small range, organic food does not figure prominently in the public relations activities of supermarkets that adopt this strategy.

Major trends observed in marketing of these products related to the four Ps of the marketing mix. The majority of these trends are adopted by retailers with the

maximum strategy, whilst only some are partly adopted by retailers with minimum or basic strategies.

Product Policy

There was an identifiable trend to enlarge the organic range, particularly in the frozen and convenience food lines like ketchup, pizza, pre-cooked foods and cola that attract the 'normal' conventional consumer. Also, creating quality assurance processes that guarantee the quality of organic food comparable to conventional foods was seen. This is crucial given that in a conventional format, customers can easily choose between organic and conventional products.

Distribution Policy

Almost all retail chains sell organic products with their own organic label. All stores keep the stock of organic products, according to the market type and local consumer characteristics like age, education, disposable income and other demographic characteristics. All retailers are well aware that they need to keep all product groups in the organic range to ensure customers are retained throughout the year. Most of the conventional and organic retail chains have developed quite well structured delivery systems. They are more in fresh food and less in dry one.

Suppliers

Interestingly, the suppliers are increasingly doing more than just delivering produce. In many cases, the supplier has taken over part of the responsibility for training the sales people from the retail chains and conducting in-store taste tests. Despite the emphasis in some organic circles on reducing food miles, there is only a partial preference amongst organic retail chains for domestic production. In most cases, the chains search out the most professional Europe wide supplier.

Communication Policy

Many conventional chains are getting success in organic sales because of their organic commitment as a public relations campaign e.g. price premiums on organic are justified on the basis of taste comparing between organic and conventional one. Sales people are being trained so that they can convince the customer regarding purchase of organic produce. Many organic products have the labels of both the retailer and the farming or certification association in order to add credibility and to make the organic assortment appear more professional. Also, clear signage was installed to help customers locate the organic products more easily.

In US, two major companies i.e. Whole Foods Markets and Wild Oats Markets, emerged from acquisitions of small companies, have approximately 10% of the total retail organic sales, operate their own product manufacturing and processing plants for fresh and baked products, have developed their own brands, and are located in very central locations, with customer parking and an inviting store atmosphere. This reflects the belief that the biggest growth in the organic market will be from increasing the frequency of the purchase of the infrequent organic consumer. They publicize prominently in linking of healthy food with environmental care and social responsibility. It is also worth noting that the companies tend to favor in-store promotion, information distribution (both have regular store magazines) and word of mouth as their strategies that is locally based and suits local market conditions.

Price Policy

The primary factor in dictating the prices for organic products is the customer's willingness to pay additional price for an organic product as compared to conventional product. However, there is no fixed pricing policy as sales margin tends to be higher for dry products and lower for fresh products (above all, milk products). Moreover, the sales margin, of course, does not account for an increase in farm gate prices due to seasonal factors that affect supply. In general, evidence suggests the additional price on organic staple foods is being incrementally lowered to meet that of conventional goods. The retail chains offer lower prices than the natural food stores but better staffing than the conventional supermarkets besides in-store promotions.

Problem of Implementation

The retail chains lack in implementation of strategies as their staff does not have so much knowledge in organic farming, certification standards, and their origin (European/national or some farmer association). So, if they really want to have good turnover, they must fully train frontline staff in the marketing of organic products. Above all, the most important strategy adopted by these successful enterprises is to attract dissatisfied organic buyers from natural food stores that have frequently high prices, poor food quality, a small product range, unfriendly staff, and an unpleasant store atmosphere, and the organic buyers from conventional supermarkets as customers of conventional supermarkets are looking for a retail outlet that has credibility with respect to sales of organic food, exhibiting professionalism and stocking fresh produce in a supermarket atmosphere. Some of the suggestions that can make the strategies more successful are providing services to the customers, lower prices which are comparable to conventional, locating in central part of the city, attractive store atmosphere and shelving, and one- stop shop experience with deep and wide range of organic products (Ritcher et al, 2005).

In U.K., three supermarkets controlled more than 80% of organic sales. Thus, supermarkets are once again bringing in the same industrial and commercial conventions in the establishment of large volume, highly regimented, long distance supply networks and the sale of standardized products which tightens the corporate control across commodity network. Over 80% of Latin America's organic output is exported which reproduces its historical dependence on agro export market and vulnerability to global price fluctuations. Latin America has 21% of the world's organic certified land and 19% of world's organic enterprises which is as much as those in Asia, Africa and Middle East combined (Raynolds, 2004).

Further, many corporate firms like Heinz, Dole, ConAgra, ADM and General Mills have all created or acquired organic brands. Horizon, a Colorado dairy farm is a $ 127 million public corporation and controls 70% of the retail organic milk market. The milk produced and sold by Horizon is produced in massive, industrialized dairies that meet strict organic production criteria, but do not reflect the original, small-farm

wholesome values that the label 'organic' connoted to many consumers. Also, the organic farms have become larger and more consolidated over time. A majority of organic crops are now grown by large firms which produce both organic and conventional products. Five largest farms in California control one-half of the $400 million organic products market. Thus, there are two organic sectors – industrial organic -made up of large corporates who produce for supermarkets and global markets, and the small organic farms- which produce for the local market (Barkley, 2005).

The conventionalization of the organic supply chain has come with the ambition of entering the mainstream i.e. the mass consumption economy. The founding concepts of organic agriculture, based on ecological limits and equitable social relationships within a fairly immediate level of local and regional community provided a powerful drive for maintaining social cohesion within economic structures. The integrity threat is now being recognized by the organic community worldwide, as a result of increasing organic monocultures, reduced market access to smallholders, decreased transparency of profits across the organic food chain, damage to local economies and overall governance. Efforts are on to protect the integrity of organic standards, further differentiate organic foods by accurate labels and promote different forms of short supply chains for local community development. Beyond standards, the International Federation of Organic Agriculture Movements (IFOAM) has recently approved the four principles upon which organic agriculture must be based: the principles of health, ecology, fairness and care/precaution. Participatory Guarantee Systems and "food miles" labelling are being developed. Socially responsible business and ethical values for certified organic products are made transparent by some trading companies (e.g. Eosta) through Nature and More labelling. In Denmark this year, one farm has raised its nation-wide delivery of organic boxes to 22,000 per week (annual sales of Euros 20 million), including both its own production and imports. Regular organic consumers are demanding more transparency and fairness across all segments of the organic supply chain. Buying power can change practices: direct selling and organic box schemes are mushrooming in several countries. Although there is still a long way to go, and that convergence with conventional distribution systems will continue, reversing the loop is being attempted. A recurrent type of slogan is: "buy local, organic and fair made" (Scialabba, 2005).

2.7. Organic production and trade, Ethical trade, and Fair Trade

The growing interest in organic and ethical production and trade has been both consumer driven and trade driven. The participation by producers in organic and ethical production may be limited by the availability of skills, labour and time (human capital) and land tenure (social capital). Increasingly, ethical and organic trading are beginning to overlap. Ethical trade can be defined as initiatives that seek to improve the social and environmental impacts of global supply chains. It is thus seen as an attempted solution to the perceived problems of market failure. But, more than trade, it is the conditions and impacts of production which is the main preoccupation of the ethical trade initiatives (Heeks and Duncombe, 2003). Soil Association Standards (SA8000) include all of the ILO core labour standards and adds health and safety, disciplinary procedures, remuneration, working hours, and management systems. These issues of labour standards are the typical issues of ethical trade but there are also more recent overlaps with environmental standards which largely focus on pollution (Heeks and Duncombe, 2003).

The ethical trading involves being people centered i.e. no child labour, fair wages, reasonable and safe working conditions, gender equality in wages and conditions, and freedom to organize: environmentally focussed i.e. sustainable environmental practices such as land use and management and non-degradative environmental practices like reducing pollution by chemical inputs: and animal centered which includes no animal testing of products and non-exploitative treatment of animals (Browne *et. al*., 2000). Ethical trade aims to improve employment conditions in supply chain with its main principles being no forced/child labour, freedom of association and collective bargaining, safe and hygienic work conditions, no exploitation/discrimination, regular employment, and fair wages (Tallontire, 2000).

Ethical trade allows companies to manage the social and environmental dimension of their supply chains and benefits poor producers and workers in developing countries. In cases of small holder tea, coffee and cocoa growers in Asia, Africa and South America where ethical trade is being applied, many of the primary concerns of the growers are not included in ethical trade standards. In marked contrast to principles of

fair trade, the producer price is not normally addressed in ethical trade though it is the repeated thing in literature on small scale commodity producers. The standards like SA-8000 and the ETI based codes do not give much consideration to price. Attention to price is important not only for small producers but also for ethical sourcing as a whole. If farm gate prices do not provide sufficient margins to primary producers then they may resort to exploitation of labour or poor environmental management which are the very basis of ethical sourcing. This, in turn, damages the reputation of the companies seeking to take responsibility for their supply chains.

Some of the elements of the success of fair trade mirror the elements of good practice in conventional chains like longer term relations between producers and buyers, transfer of knowledge between the two and fair trading practices like transparency about price, weight and on time payment, all of which result in trust, emphasized by fair trade organizations. The small holder priorities, as identified by themselves, include land tenure security, fair and timely payment and distribution of benefits which are generally not part of ethical sourcing (Blowfield, 2003).

Fair trade principles can be considered as important elements in the sustainable management of value chains as they are aimed at redistributing income more equitably among the various actors involved. The fair trade labeling organization mentions the following elements at the production level;

1. better prices for producers especially for small producers and labourers
2. removal of middleman
3. pre-financing of production through provision of credit
4. organization of producers into democratic cooperatives
5. integration of women in decision making
6. accountable management
7. constitution of social and investment fund and
8. fostering of ecological and quality production standards

At the consumer level it seeks;

1. better transparency in transformation procedures (traceability),
2. an awareness of north-south economic and social gaps,
3. solidarity raising mechanisms
4. production of certified quality products and
5. awareness of labeling and monitoring processes.

Though fair trade has achieved significance in some countries such as Netherlands and Switzerland and for specific commodities like coffee (5% of the market) and bananas (30% of the market), it remains very marginal in global terms with limited impacts on the developing countries. FLO is the umbrella organization for fair trade certification and labeling organizations i.e. Max Hawlaar, Transfair International and the Fair Trade Foundation which operates in 15 European countries, North America and Japan since 1997. So far as income distribution patterns are concerned, it is important to see whether they differ in fair trade chains significantly from that of regular value chains. An analysis of regular value chains for coffee and the Max Hawlaar chain revealed that only transaction cost was slightly lower in fair trade value chain due to more direct relations between actors and reduction in number of these actors. However there was a difference in final price received at the farm gate due to the differences in production, power and social conditions. In fact, the prices paid to producers in fair trade channel were two to three times higher and the cooperative profit was the result of the elimination of private intermediaries. Under all conditions the price paid to fair trade producers was ten cents per pound higher than the conventional market price. The other important question relates to the distribution of profits within the fair trade chain (Auroi, 2003).

An increasing number of fairly traded goods are also organic (70%) and the organic movement is moving towards including social rights and fair trade in its standards. Fair trade involves partnership with producers and consumers for improving the position of dis-empowered members through trade. It aims at poverty alleviation through fair price to producers, supporting producers in social/environmental projects, gender equality, product development for high market access, and long-term relationship for stability and security of livelihoods. The logic of fair trade is that there are unfavourable terms of trade to developing world in terms of unfair prices which need to be corrected through intervention. Also, it aims to serve as cushioning

mechanism during the transition of producers to high value products. Partnership involves fusion of market and ethics in the supply chain links from producer to consumer. There are two approaches to fair trade – labeling approach and branding approach. The core of the fair trade partnership is the branding approach adopted by the Alternative Trading Organizations (ATOs) and the producer organizations/ Self Help Groups/Co-operatives. Fair trade aims to bridge the north-south divide in development through trade (Tallontire, 2000; Tallontire, 2001).

There are many fair trade agencies in the north and the south like Shared Earth, Traidcraft, OXFAM, TWIN (UK), SERRV, Equal Exchange, Market Place (USA), Bridgehead, Ten Thousand Villages (Canada), Nepali Bazaro, Global Village (Japan), Aid Through Trade, Trading Partners (Australia), Asha Handicrafts, Silence, IRFT (India), and Fair Trade Group (Nepal) besides the International Federation of Alternative Trade (IFAT). There have four phases of the fair or alternative trade movement i.e. goodwill selling during the 1950s and the 1960s; solidarity trade during the 1970s and the 1980s; mutually beneficial trade during the 1990s with consumer focus; and trading partnerships which is an emerging mode of fair trade. The main products which have been the focus of fair trade are: tea, coffee, cocoa, spices, and handicrafts and major forms of support have been marketing, skill upgradation, and finance. But, those critical of this paradigm of development through trade argue that it helps some producers at the cost of others, and prolongs dependence of producers/countries on losing products (Tallontire, 2000). Despite this, fair trade will be an important basis for organic production and trade as a means to bridge the concerns of the developed and the developing worlds (Yussefi and Willer, 2003).

If there is consumer pressure for this overlap, then there would be considerable implications for the volume of trade, the developing country producers' ability to meet the requirements and for the working conditions and livelihoods of producers. The philosophy of organic agriculture has always been to progress towards, as per International Federation of Organic Agricultural Movements (IFOAM), an entire organic production chain which is both socially and ecologically responsible. This would mean that all organic produce certified by organic produce agencies would also be ethical. Internationally, many organizations involved in organic or ethical trade see a natural link between ethical trade and organic production. This is particularly true

of smaller organizations in direct touch with suppliers where, at the operation level, some producers could be viewed as ethical and organic in all but name. All the fair trade producers produce some brands of products that carry both fair trade and organic produce symbol. The market players, especially supermarkets see this link to the consumer concern for environmental issues and perceive that it is impossible to be fully ethical without being organic and vice versa. It is possible for organic production to be ethical by adding social criteria to the standards of organic regulatory authorities. Similarly, ethical can also become organic with the inclusion of some limited environmental aspects (Browne, *et.al*., 2000). Studies have shown that organic and fair trade markets do reduce farmers' livelihood vulnerability when small scale producers participate in these alternative markets (Bacon, 2005).

The success of fair trade shows that market based instrument can be used to make progress toward environmental and social goals. Fair trade is unique among certification scheme world wide because the buyers rather than the producers pays the cost of certification and monitoring by FLO. As these costs are passed up the commodity chain, fair trade is mostly financed by consumer's willingness to pay more for fair trade products. This willingness is supported by the building of direct personal ties between northern consumers and southern producers. The fair trade players are also attempting mainstreaming strategy for rapid growth in market share by encouraging corporations, governments, major retailers and other large economic actors to support fair trade. Fair trade significantly modifies the distribution of benefits in the conventional chains and thus contributes to direct and indirect benefits to small scale farmers, their families, organizations and communities. The direct benefits include a guaranteed price and technical support to such activities. The indirect benefits include strengthening farmers' organizational capacity. Though there are concerns that it may be serving the strongest and most established producers' organizations rather than addressing the most marginalized. In fact, by mainstreaming fair trade products, there may be a risk of including the original targets of fair trade criticism i.e. powerful global corporations among fair trade's key participants (Taylor, 2005).

The above review and analysis shows that the organic production and market sector suffers from many governance related issues from the perspective of primary

producers like certification barriers, marketing firms' control over chains and growing importance of new standards like fair trade and ethical trade, the last one working to the potential advantage of primary producers.

Chapter 3

Organic Production and Market in India: Status and Issues

3.1. Introduction

There has been plenty of policy emphasis on organic farming (OF) and trade in the recent years in India at various levels as the country is believed to be well placed in this regard. Organic produce is being seen as a natural choice by consumers, and consequently by producers, in both international and domestic markets due to the problems in the supply chain of conventional or mainstream agro produce. The growing health concerns and increasing non-tariff barriers like Sanitary and Phyto Sanitary (SPS) measures in the international market (Naik, 2001), coupled with non-viability of modern farming on a small scale, are some of the factors behind the move from chemical based to organic production and consumption systems. OF has become important and necessary in the context of agricultural problems of high costs, environment pollution, and the need for improving public health, food quality, and food safety (Thakur and Sharma, 2005).

The 10^{th} five year plan emphasizes promotion of and encouragement to organic farming with the use of organic waste, Integrated Pest Management (IPM) and Integrated Nutrient Management (INM) (GOI, 2003). There was an allocation of Rs. 100 crore for the promotion of organic farming. Even 9^{th} five year plan had emphasized the promotion of organic produce in plantation crops, spices and condiments with the use of organic and bio inputs for protection of environment and promotion of sustainable agriculture (GOI, 2001). There are many state and private agencies involved in promotion of organic farming in India. These include various ministries and departments of the government at the central and the state levels, universities and research centres, Non-Government Organisations (NGOs) like AME, and OFAI, producer organizations like VDAI, TOFA, VOFA, and Eco-farms, and certification bodies like Indocert (based at Aluva, Kerla), IMO (Institute

of Marketecology) India Pvt. Ltd. (based in Switzerland with an office in Bangalore), Ecocert International (based in France and Germany and branch office in Aurangabad), SGS India (based in Switzerland with offices in Delhi and other Indian cities), SKAL (based in the Netherlands with branch office in Mumbai), and LACON GmbH (based in Germany with an office in Aluva, Kerala) besides various processors and traders. In 2001, a National Programme for Organic Production (NPOP) which aims at establishing national standards for organic products, based on IFOAM standards, was launched. More recently, Indian Competence Centre for Organic Agriculture (ICCOA) has been set up which collects, analyses, documents and disseminates information and knowledge on organic farming and builds capacity of individuals and institutions besides providing advocacy, networking and consultancy services (Kumar, *et. al.*, 2003; Garibay and Jyoti, 2005).

The central and state governments have also identified Agri Export Zones for agricultural exports in general, and organic products in particular, in some states. Products suitable for local production and processing have been identified and many facilities and incentives are being offered to encourage production and export of organic products in such zones. In UP and Uttaranchal, the Diversified Agriculture Support Project (DASP) is promoting organic farming practice where biodynamic farming, compost, vermiculture, cow pat pit (CPP), green manuring, biocontrol agents, Integrated Pest Management (PIM), Integrated Nutrient Management (INM), Integrated Crop Management (ICM), etc, are being promoted (UPDASP brochure). The Punjab Agri Export Corporation has launched a programme to promote organic farming in Punjab since 2003 as part of its crop diversification programme. Many state governments are encouraging organic farming as part of their agricultural policies. These include Maharashtra, Karnataka, M.P., Delhi, Gujarat, West Bengal, Orissa, Manipur, Asam, Meghalaya, Sikkim, Tamilnadu and Kerala (Mahale, 2002). Uttaranchal and Mizoram have declared themselves as organic farming states. In Bangalore, Nilgiris, with 50 outlets in south India, sources organic produce from small growers which is supply driven

(Chengappa *et. al.*, 2003). Similarly, International Resources for Fairer Trade (IRFT) based in Mumbai, procures organic cotton and other agro products to sell them to Indian and foreign buyers as part of its fair trade policy to help the rural poor (IRFT, Mumbai, Annual Report, 2002-2003). There are many private companies like Ion Exchange, Mumbai and Agrocel Industries, Mumbai which are into export and domestic marketing of organic produce. Besides, there are many projects supported by international development agencies like ADB, UNDP, GTZ, IFAD, ITC of UNCTAD/WTO, and FAO for the promotion of organic farming (Mahale, 2002).

This chapter discusses the Indian rationale in organic production and trade in section two followed by status of domestic organic sector in section 3, economics of organic production in section 4 and the nature of domestic market in section 5. The policy environment for organic sector is analysed in section 6.

3.2. Rationale for Organic Farming in India

The logic for organic farming comes from the more recent environmental related non-tariff barriers like pesticide residues and fruit fly problem in fruit and vegetable exports from India to the European Union (EU), the USA, China, Australia and Japan, hormones in livestock products exports to the EU, and sesame and tobacco exports to Japan. Even textile exports to the EU and the USA have not escaped environmental barriers. The United Arab Emirates (UAE) ban on Indian meat imports (for 10 companies) due to health and hygiene reasons and the EU ban on Indian fish imports due to lack of Sanitary and Phyto-Sanitary (SPS) standards especially in canning (only 90 out of 404 plants are approved for fishery exports to the EU) are other recent cases of SPS barriers. The Hand Picked Selected (HPS) groundnut and spices meant for the EU, Italy and Germany and chillies for Spain have faced trouble due to aflatoxin and chemical residues. India had been delisted from the list of approved countries in the EU for import of egg powders for non-

submission of Residue Monitoring Plan (RMP). In dairy products export, , input related problems like quality of fodder which affect milk quality and mastitis in bovines and F& M disease in cattle and buffalo which leads to deterioration in composition of milk, are potential barriers. In case of grains, the 'Karnal bunt' in wheat has been reported to be a problem and Iran rejected Indian wheat sent by two private exporters due to quality problem. Indian basmati rice consignments (40) (of 16 companies) were detained in 1999-2000, by the United States Food and Drug Administration (USFDA) on grounds of being filthy and containing pesticides. Further, the cost of compliance to these standards or barriers is so high that it is estimated that Bangladesh would need to spend 9.4% of its annual earnings from fish exports to install a Hazard Analysis and Critical Control Points (HACCP) plant and 1.3% to maintain it (Delgado, et al, 2003).

Besides the environmental and economic concerns (Prakash, 2003; Narayanan, 2005), growing market is another important stimulant for organic farming in India. Several countries are interested in buying organic cotton, the annual demand for which is around 15 million bales (Bajwa, 2003). That consumers are willing to pay premium prices for organic products in countries like the USA and even in India is revealed by many studies in the late 1990s. In Baroda and Ahmedabad, more than 70% of the consumers with incomes above Rs. 5,000 per month were ready to pay 15-20% premium for organic food. This premium is required to make initial returns from organic farming comparable to that from conventional agriculture (Naik, 1999 and 2001). But, only about 20% of the consumers in India were aware of organic produce and only 10% had ever bought it. But, price premium can decline as economies of scale are attained in marketing and distribution (Krissoff, 1998) or due to rapid expansion in supply in the absence of market development for organic produce (Lampkin and Padel, 1994).

In India, besides the traditional strength of Indian farmers in organic production, at present, in addition to food grains output of above 200 million tonnes, more than 350 million tonnes of organic matter in the form of biological wastes of cereal and

legumes plants such as straw and stubbles and another more than one billion tonnes of annual and perennial crop plants are produced per annum. This plant biomass can be utilized as such or after proper bioconversion through the low cost bioconversion plants into organic manures (table 3.1). The left over of biogas production using animal, poultry and other excreta and organic or biological wastes is another rich resource for enhancement of soil productivity and soil health (Thakur and Sharma, 2005).

Table 3.1: Potential Organic Biomass in India

	Present Availability [million tonne (MT)]	*Nutrient NPK (MT)*
Green Manure=22 Lakh ha	20 lakh ha	1.00
Farm Yard Manure=500 mt	100	1.50
Crop Residues=300 mt	100	1.50
Rural Compost= 285 mt	134	2.00
City refuse = 14 mt	1.50	0.20
Biogas slurry= 28 mt	7.00	0.30
Biofertiliser= 10000 tonne	full	0.24
Total	**362.50+20 lakh**	**6.74**

- **Average Nutrient Content** : 0.5-2.0% N, 0.5-1.0% P2O5, 1.5-2.0 K2O

Source: Bhattacharyya, 2005.

3.3. Status of Organic Production in India

Though traditional agriculture which comes close to organic farming practices has been practiced in India since time immemorial (6500-7000 BC), the modern organic farming that too certified is more recent (since early 1980s) and export market oriented (Mahale, 2002). Major organic produces in India include plantation crops i.e. tea, coffee, and cardamom, spices i,e. ginger, turmeric, chillies and cumin, cereals i.e. wheat, rice, jowar, and bajra, pulses i.e. pigeonpea, chickpea, green gram, red gram, and black gram, oilseeds i.e. groundnut, castor, mustard and sesame, fruits i.e. banana, sapota, custard apple and papaya, and vegetables i.e. tomato, brinjal, and other leafy vegetables, besides honey, cotton and sugarcane especially for jaggery (GOI, 2001; Subrahmanyam and Nagasree, 2005; Appendix 3.1, and table 3.2). But, there is no organic production of meat products like poultry, livestock and fisheries in India as yet. Since October, 2001, organic product

exports have been brought under regulation and can not be exported unless certified by APEDA (under Ministry of Commerce), its accrediting agencies or certifying agencies approved by them. This has necessitated the foreign certification bodies to establish local offices in India (Mahale, 2002). In 2001, in Rajasthan and Maharashtra, there were 3,20,000 farmers were practicing, under watershed projects, sustainable agriculture in 3,32,000 hectares with yields increasing multi-fold compared with earlier systems of farming (Stoll, 2002).

Table 3.2: Organic crops, regions and production organization on India

Organic crop	**Area**	**Producers**
Tea (Orthodox, CTC, Green)	Darjeeling, Assam, Dooar, Nilgiris	Plantations
Coffee (Arabica, Robusta)	Western Ghats, Nilgiris	Plantations and individual small farmers
Spice		
Pepper and cardamom	Western Ghats, Nilgiris	Plantations and individual small farmers
Cloves, nutmeg, mace,	Kerala, Tamilnadu	Small farmers + farmers' Organizations
Garlic, ginger, turmeric	Throughout India	Small farmers + farmers' organizations
Fenugreek, fennel, cumin, coriander	Throughout India	Small farmers + farmers' organizations
Sesame	Gujarat	Contract farmers
Coconuts	Along all coasts	Small farmers
Fruits		
Apples, pears, peaches	Himachal Pradesh and Kumaon	Small and medium farmers
Mango, bananas, pineapple, papaya	Maharashtra, Madhya Pradesh	Small and medium farmers
Apricots	Himachal Pradesh and Kumaon	Small and medium farmers
Dry Fruits		
Chestnuts	Jammu & Kashmir	Small farmers, one processor
Pear, mango	Kodaikanal	One Processor
Cashew nuts	Pondicherry, Tamilnadu	Small farmers, few processors
Vegetables		
Potatoes	Kumaon hills	Small farmers
Cabbage	Kumaon hills	Small farmers
Wheat, maize and Sorghum	Haryana, Punjab, Madhya Pradesh, Uttar Pradesh, Maharashtra	Farmers and farmers' groups
Rice		
Basmati	Haryana	Medium and big farmers
Other varieties	Throughout	Small and medium farmers
Pulses	Throughout	Small farmers
Oilseeds	Madhya Pradesh	Medium and big farmers
Coarse grains	North-east, Gujarat, Orissa	Small farmers
Honey	Forest areas	Individual collectors, NGO organized groups
Cotton	Gujarat, Madhya Pradesh, Andhra Pradesh	Farmers' Organizations, Contract Farmers, Individual farmers

Source: Mahale, 2002.

In 2003, 5661 farms in India were certified as organic. In India, out of the 146 million hectares of net cropped area, only a small fraction of 2. 6 million hectares are covered under certified organic (1.8% of total) (table 3).

Table 3.3: Present status of organic production and export

Total production	119656 Tons + 1657000 nos. of seedlings & cuttings + 264000 litres effective micro organisms
Total quantity exported	6792 Tons
Total value of quantity exported	Rs.7123 Lakhs
Total area under certified organic cultivation	2508826 ha (This includes wild herbs collection from forest area of MP & UP of 2432500 ha)
Number of items exported	31

Source: APEDA Website, downloaded on October 4, 2005.

In fact, over 60% of the farm holdings are with marginal growers holding less than one hectare, most of whom do not use chemicals and use traditional practices, but they are not also within the ambit of formal certification and are not considered as 'organic' for trade purposes as they do not possess any records to authenticate the organic integrity of their farms (Daniel, 2005). Organic produce (14,000 tonnes in 2002) was only 1.5% of total and most of it was exported, with domestic sales being only 1000 tonnes (0.00006% of total food consumption). Also, there is little focus on marginal crops/subsistence crops (millets, coarse cereals). In 2002, there were more than 100 organic projects in organic production organised by NGOs, Government and private companies and individuals with atleast 10,000 small farmers under certification (Garibay and Jyoti, 2005). The table below gives the potential for organic farming in India.

Table 3.4: Areas of high conversion potential for organic farming in India

Area	Crops	Rationale
Himalayan region	Tea, fruits, vegetables, nuts, forest produce	Delicate soils; organic agriculture has made inroads
Western Ghats and Nilgiris	Coarse grains, fruits, vegetables, forest products	Delicate soils, dry land farming and forest collection
Tribal area in low land: Orissa, Madhya Pradesh	Cereals, pulses, millets	Traditional agriculture, dry land farming
Other dry land areas	Cereals, pulses, millets	Potential productivity not yet reached. Not touched by official research and extension services.
Green Revolution areas: Punjab, Haryana, Western Uttar Pradesh and Tamil Nadu	Rice, wheat, pulses, oilseeds, cotton, cattle	Over exploitation visible, increased chemical inputs and costs of production

Source: Mahale, 2002.

There are three types of organic producers in India – traditional organic growers who grow for their subsistence needs, commercial farmers who have surplus and export their produce through different channels, and private companies which either have their own farms or organise large conversion programmes with growers (Yussef and Willer, 2003; Ghosh, 2004). Contract farming is assuming importance in organic agriculture in India due to the requirement of steady supply. The contracting agencies, mainly private companies, organise training and certification for the contract growers and promise a buy back of produce at some pre-agreed price (table 3.6). But, if the grower pays for the certification, owns certificate, and exports directly, s/he can get premium of the order of 50%. On the other hand, if s/he owns a certificate and sells to an exporter, s/he gets a premium of 25-30%. If s/he does not own the certificate, as the agency pays for it, s/he gets only 15-25% premium (Mahale, 2002). This is due to the fact that certification costs for individual growers are quite significant (table 3.5).

Table 3.5: Certification costs in organic production

Category of client	Item of cost	Cost (Rs.)
Small farmers and co-operatives	Travel and inspection Report making Certification	12,000/day 5000 flat fee 5000/certificate
Estate manufacturers and exporters	Travel and inspection Report making Certification	19,200/day 5000 flat fee 5000/certificate
Large and medium sized processors	Travel and inspection Report making Certification	16,800/day 5000 flat fee 5000/certificate

Source: Prakash, 2003; Subrahmanyam and Nagasree, 2005.

Further, within organic, there are variants. For example, part of the paddy is organic, all paddy is organic but subsidized by other crops, agriculture subsidized by non-farming activities, partial fulfillment of criteria/systematic "blending" like conversion period, not all inputs are organic, neighbourhood is not organic, chemicals are "necessary evil", and 'if all else fails, we will/may use chemicals' (Balasubramanian, 2005).

Table 3.6: Organizational characteristics of organic production in India

Organizational Level	Farmers/Workers	Examples
Plantation-companies	Plantation workers	Tea companies
Corporate farming	Agricultural workers and contract farmers	LT overseas, Indian Organic Food, Ion Exchange
Marketing organizations	Contract farmers	KASAM, Orissa, Amar Singh, Jammu, Yardi & Soree, Haryana, Agrocel, L&T, Satluj, Sunstar
Interest Groups/NGOs	Individual Farmers	ARISE, INHERE
Farmer's Organizations	Individual Farmers	Maikaal/Bio-re, Peermedu Development Society, KeyStone, VOFA, TOFA
Individual Farmers	Individual Farmers	Small/medium and large farmers

Source: Mahale, 2002 with updation by author.

The organic products available in the domestic market are rice, wheat, tea, coffee, pulses and vegetables. On the other hand, products available for export market, besides these, include cashew nuts, cotton, oilseeds, various fruits and medicinal herbs (Appendix 3.1). Whereas wholesalers and traders, super markets and own shops are the major channels in the domestic market which is mainly in metropolitan cities and accounts for only 7.5% of the total organic production, the market channel for export of organic products is export companies with the exception of tea which is produced and exported by tea estates.

The major markets for Indian organic products are the EU, the USA, Canada, Australia and the Middle East Asian countries (Appendix 3.1). Quality production with traditional methods, low use of chemical inputs in mountain and tribal areas, easy availability of cheap labour, NGO interventions, and various types of support provided by the governments are the main advantages of Indian organic products. On the other hand, high price expectations, delayed delivery, quality restrictions, lack of certification and marketing networks are some of the constraints in marketing organic products internationally (Singh, 2003).

On the other hand, in home market, there are no separate markets for organic products in many commodities like wheat in Rajasthan (Rao, 2003). Thus, the market does not offer any incentive for the production of organic produce. But, more recently, some agencies have tried to create separate market outlets for organic produce like the Maharashtra Cotton Marketing Federation which purchased organic cotton from growers separately, for export (GOI, 2001).

The other limitations are**:** lack of government support, many government departments lack information about organic farming, insufficient training and extension for farmers, lack of market information and market access constraints, difficulties with export licenses and organic certification requirements, supply difficulties, lack of consistent quality and regular supply, lack of processing

facilities, and lack of organic input such as organic seeds, bio-fertilizers, bio-pesticides (Mahale, 2002).

3.4. Economics of Organic Production in India

That organic farming is, most of the time, viable is brought out by many studies recently. Table 3.7 gives cost and yield comparisons for valley rice, sugarcane, and banana in India during 2000-2003.

Table 3.7: Comparison of cost and yield of traditional, organic and conventional farming systems in India

Crop	Years	Production cost (US$/hac)			Yield (kg./hac)		
Valley		**Traditional**	**Organic**	**conventional**	**Traditional**	**Organic**	**conventional**
Rice	2000	220	415	360	3250	4500	5750
	2001	230	410	385	3100	4650	5000
	2002	235	380	410	3100	4900	4850
	2003	250	365	435	3150	5350	4900
Sugar	2000	665	1040	835	1,05000	112000	155000
cane	2001	680	1020	970	87500	116000	137000
	2002	695	965	1020	102000	121500	108000
	2003	705	880	1035	92000	128000	97000
banana	2000	1940	2015	2845	17500	22500	31000
	2001	1120	1210	1490	18000	28000	29500
	2002	1135	1180	1510	20500	33000	27500
	2003	1140	1095	1640	21000	36000	23000

Source: IFAD, 2005.

In H.P., the net income per hectare from organic farming was found to be 2-3 times higher than that in conventional farming over three years in case of maize, wheat, rajmah and peas. This was not only due to higher yields, and lower costs but also the higher prices obtained by organic produce as well as byproducts which were 2-3

times higher in case of wheat and various pulses and vegetables due to taste and freshness reasons (Thakur and Sharma, 2005). In Haryana, the cost of production was lower and net returns higher (2-3 times) in basmati rice, soyabean, arhar and wheat because of 25-30% price premium on organic produce and lower cost of production and marketing (Khatkar et al, 2003). The farmer's net returns ranged from a low of Rs. 8-9 thousand on traditional vegetables and as high as Rs. 17-28 thousand in the case of baby corn and exotic vegetables like broccoli and red and Chinese cabbages (Rathi, et al, 2003; Singh, 2003).

In Maharashtra, organic cotton production was concentrated in low productivity and high uncertainty areas like Vidarbha and has been grown since the early 1990s. The Vidarbha Cotton Growers' Association, set up in 1994 with 135 members, has tied up with international agencies for the exports of the crop (GOI, 2001; Vaswani et al, 2003). The farmers preferred organic cotton for risk aversion, lower cost of production (30%) and cash payment in that order. The yield was lower by 20% though the price was higher than that of conventional cotton. Thus, the cost benefit ratio of organic cotton was 1:1.63 as against 1:1.47 for conventional cotton. The major problems were non-availability of suitable varieties and certification agencies, and delayed procurement and payment by the buyers (Ramasundram et al, 2003; Singh, 2003). In Gujarat, organic production of chickoo, banana and coconut had higher profitability but field crops and mango had both lower input costs as well as yields (Naik, 2001).

In Karnataka, groundnut, jowar, cotton, coconut and banana were organic crops and the major reasons for shift to organic farming were sustained soil fertility, reduced cost of cultivation, higher quality of produce, sustained yields, easy availability of farm inputs and reduced pest and disease attacks. Most of the organic inputs were being obtained in-house or from local farms though all of it was totally non-certified because of the high cost of certified organic manure and ignorance about it. Almost all the farmers agreed that organic farming increases soil fertility. But, only 50% of them found organic yields higher than conventional. The cost of

organic farming was found to be lower by 80% of them and produce quality good in all cases. But, only 40% of them fetched higher price for organic produce. The farmers perceived the demand for organic produce to be low or same as for conventional produce. Only about 22% of the farmers were producing organic products exclusively for market. The cost of cultivation for organic groundnut was lower, price higher, and net returns lower than conventional groundnut with the cost benefit ratio being only 1:1.26 compared to 1:1.31 for conventional groundnuts. In case of jowar, the cost of production for organic was higher (20%), price more or less same, and net returns higher due to the higher yields of organic variety. Thus, the cost benefit ratio for organic jowar was found to be 1:1.36 compared to 1:1.28 for conventional. Similar was the case of cotton with a cost benefit ratio of 1:1.34 (organic) and 1:1.24 (conventional). The cost benefit ratios for coconut and banana were significantly higher for organic farming (1:1.7 and 1:3.66 respectively) compared to conventional farming (1:1.31 and 1:2.82) due to the lower cost of cultivation and higher price factors. The major problems encountered by organic farmers were found to be initial lower yields, no price incentives, and no separate markets for organic produce, besides lack of and high costs of certification (Yadav et al 2003 reported in Singh, 2003).

A more recent study of organic and conventional cotton and other rotation crops in M.P. covering 60 organic and conventional farmers each across 10 villages in MP (Nimar Valley) for 2003 and 2004 (two seasons) by Maikaal bioRe (another organic cotton player in the area) showed that the production cost in organic fields was lower by 13-20% largely due to lower use of chemical inputs like fertilizers and pest management chemicals. On the other hand, the yield were either as high as or higher than those in conventional cotton due to improved soil fertility, better nutrient management, more intensive cultivation and better access to irrigation. Thus, gross margins (revenue minus variable production costs excluding own labour) were 52-63% higher in organic cotton due to higher cotton yields, organic price premium (20%) and lower production costs. But, the yields were much lower in rotation crops like chillies, soya and wheat, same in maize and sorghum, and

most of these crops were sold in conventional market without any premiums. Over all, the profits of an organic farm (4.9 hectares on an average) based on margins in seven major crops were 14-18% higher that that from a conventional farm of the same size (Eyhorn et al, 2005).

The hindrances to organic farming, in general, include high initial cost i.e. cost of conversion in terms of lower yields and higher costs (15-20%), high cost of certification especially for relatively small farmers (Klonsky and Smith, 2002; Subrahmanyam and Nagasree, 2005) as, for example, IFOAM certification costs a maximum of 5% of sales value in general, and 2% of the sales value of produce if a local certification organisation exists (Ghosh, 2004), complicated production technology, alienation of farmers from the concept, lack of standards, and lack of large market opportunities comparable to those for non-organic produce markets (Levin and Panyakul, 1993). It takes three years for a farmer to free his land completely of conventional material after stopping the use of chemicals as nutrients and crop savers. Because of this, it becomes difficult for farmers to start organic farming, as their neighbours may not cooperate. The cooperation from neighbouring farmers is required as pesticides and fertilisers used by them can affect the organic crop of a farmer. To protect organic crops from pesticides, that may be used in the neighbourhood, one has to raise at least 20m-high wind barriers. This raises the cost of production. Still, it is very difficult to stop chemicals from seeping into organic fields from the neighbourhood through water used for irrigation (Dhaliwal, 2003).

3.5. Nature of Domestic Market for Organic Produce

Only about 8% of the total organic produce is consumed by the domestic market (Raste, 2004). The products being sold in broadly organic domestic market include certified, natural, in-conversion, chemical free, pesticide free, eco friendly, and truthfully labeled organic. In terms of brands, there are both company and retail store brands. The distribution of organic products happens through channels like exclusive stores/outlets, co-operative buyers' groups (Ghosh, 2004), and corners in

conventional shops/outlets for food. Exclusive shops/outlets (Ion exchange, Mumbai/Pune, Nilgiris, Bangalore, Sresta, Hyderabad {shop-cum-eatery}, Jatan, Vadodara, Back to Nature, Dehradun), Organic corners in large supermarkets (Star India Bazaar, and Big Bazaar in Ahmedabad (Sanskruti)), Advance order based sale (Mumbai grahak panchayat, Jatan, Bhai Kaka Krishi Farm (BKKF)), Home delivery (Kheti Virasat, Nabha, BKKF, VV Nagar) and Organic hut (BKKF, VV Nagar) are also emerging as means for promotion as well as distribution and customer relationship building (Fig.3.1). There are also retail brands in Delhi (with web based sales), Organic food cafés (Navdanya, Delhi's 'Slow food café' as against the fast food outlets), Sales from eatries (Navdanya in Delhi, Seva Café in Ahd), and Corporate-NGO alliance (Navdanya-Nirulas joint branding) besides exclusive traders/distributors (O&N, Pune). The organic products in Indian markets cost atleast/almost double the price of the conventional products. Further, more than 50% of all organic sales in the domestic market are accounted for by supermarkets and processors (Garibay and Jyoti, 2005; table 3.8, and Fab India Organics prices, see table in Fab India case study).

Table 3.8: Price range of Conventional and Organic produce in Indian Market

Product	**Conventional (Rs./Kg.)**	**Organic (Rs./Kg.)**
Rice	15-60	32-110
Wheat	15-25	35-40
Coffee	350-500	475-1000
Tea	250-500	450-1300
Spices	250-800	400-1500
Pulses	25-40	50-75
Fruits	20-100	80-100

Source: Raste (2004).

Major promotional tools include launch of organic brands (24 lettered mantra, Hyd, Vasudha/Navrang, Indore), promotional literature (brochures, pamphlets by corporates/NGOs), participation in organic food festivals/rural exhibitions/melas, relationship building for larger purpose (like Jatan 'not a shop'), outlet level promotion/ 'in shop' promotion, and implicit 'ethical/fair trade' identity.

The transition to organic produce consumption has been slow in India mainly because of the lack of focus at the marketing end as:

1. Large departmental stores give token recognition to organic products by assigning a shelf or two. And even these are rarely well stocked. So, a customer can never get a full range of organic products to serve a complete meal.

2. While the NGOs do a yeomen service to the organic cause at the growers' end, they are not able to link as effectively with the customers. Thus, the transition to "organic" continues to remain difficult for both the farmer as well as the end consumer.

3. Lastly, organic produce has got identified as an expensive, niche product (Dubden Green website).

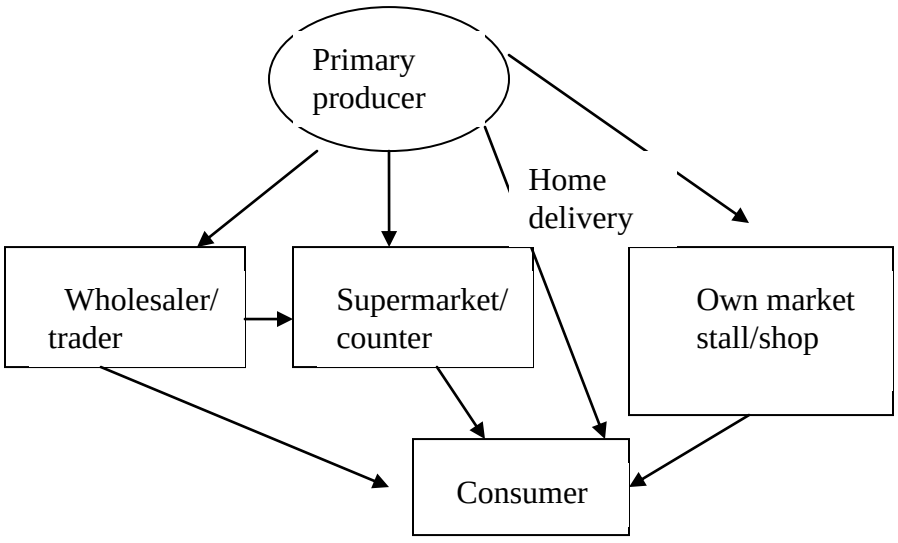


Fig. 3.1: Distribution Channels in domestic organic produce market (Source: Kumar and Jain, 2003 and own updation)

Major problems in marketing of organic products include premium pricing, available only in high end shops/alternative stores, authenticity of produce, lack of policy support, lack of consumer awareness about organic, high retailing overheads due to smaller volumes, costly to maintain separate supply chain, lack of regular availability of supplies, disposal of in-conversion produce, no separate markets for bulk selling like in cotton, high spoilage due to storage problems/contamination/sales returns/repacking (quality loss), contamination, and lack of complete range esp. for institutional sales. Further, a stagnating local market, small volumes limited and scattered product range, irregular supply line, high prices for organic produce, limited number of processed products, lack of domestic and international market information on suppliers, prices and qualities, lack of consumer awareness, absence of Fair Trade Practices, insufficient storage and post-harvest facilities as well as adequate technical knowledge, lack of segregated cold storage facilities for perishable products, unreliable transportation systems, high costs of certification, especially for small farmers, and certification primarily based on documentation, while most small farmers are illiterate and weak in marketing of organic produce (Mahale, 2002).

The major factors in the success of organic farmers in Haryana were found to be marketing of vermi compost and contractual marketing of produce (Rathi et al, 2003; Singh, 2003). The marketing constraints in organic farming at farmer level in H.P. in case of 95% farmers included lack of marketing intelligence, lack of right marketing network, lack of regular supply. The other major problems were that of lack of effective extension and lack of availability of organic inputs like biofertilisers and biopesticides (Thakur and Sharma, 2005).

3.6. Policy Support for Organic Produce Sector

Government support for organic production and trade in India comes from various quarters. The Ministry of Commerce has done the following:

- Launching of National Programme for Organic Production (NPOP) in 2000 (Annexure 3.1)
- Constitution of National Steering Committee (NSC)
- Preparation of National Standards, Accreditation criteria, Certification/Inspection procedure, and organic logo
- Identification of six Accreditation agencies eg. APEDA, Coffee Board, Tea Board, Spices Board, Coconut Board, and Directorate of Cashew and Cocoa Development, and
- Constitution of the National Accreditation Board.

On the other hand, Ministry of Agriculture which entered the organic scene only in 2000 with the setting up of a task force on organic agriculture (Mahale, 2002), has also implemented the following:

- Launch of National Project on Organic Farming with an outlay of Rs 57.05 crore which was recommended by Task Force on Organic Farming under the chairmanship of Kunwarjee Bhai Yadav (2000), from October 1, 2004 with the following objectives:
- ➢ Financial Assistance for setting up Biofertiliser unit/Vermiculture Hatchery/Fruit and Vegetable compost unit.
- ➢ Training programme for certification, inspection agencies, service provider, biofertiliser manufacture, quality control, extension functionary, and farmers.
- ➢ Field demonstration with vermicompost, city compost, setting up of Model organic farms and utilization of enriched biogas slurry.
- ➢ Market development, production, development of new initiation, conference, workshop and publicity.
- ➢ Setting up of National Institute of Organic Farming (NIOF), subsuming existing infrastructure of NBDC and its 6 Regional Centres (table 3.9).

Besides that, it also provides the following types of support:

- Support to commercial production units and capacity building

- Organisation of trainings, field demonstrations, seminars, conferences etc.
- Market development, formulation of technical package, development of new technology, and
- Standard development and implementation of certification & inspection process. It provides 50% subsidy on cost of certification to organic growers during conversion period (Raste, 2004).

The focus areas for NCOF/RCOF (table 3.9) are:

- Identification of area and crop for promoting Organic Cultivation
- Preparation of Organic package of practice
- Assurance of Organic Input production and supply
- Development of cost effective certification process including domestic certification
- Preparation of domestic standard in simpler way following NPOP standard
- Development of domestic market, and
- Development of regulatory mechanism.

Table 3.9: Location of NCOF and RCOF and their jurisdiction

Name of the centre	***Location***	***Jurisdiction***
NCOF	Ghaziabad	All India, esp. Delhi, UP and Uttaranchal
RCOF	Bangalore	Karnataka, Kerala, TN, Pondicherry
RCOF	Bhubaneshwar	Bihar, Orrisa, West Bangal
RCOF	Hissar	Haryana, HP, Punjab, J&K
RCOF	Imphal	All NE States
RCOF	Jabalpur	MP, Gujrat, Rajasthan, Daman & Diu
RCOF	Nagpur	Maharashtra, Andhra Pradesh, Goa, Dadar & Nagar Haveli

Source: Bhattacharya, 2005.

More recently, FAO has launched a competence building project in organic agriculture project jointly with the MoA with the following objectives:

- Preparation and dissemination of organic production package.

- Preparation and dissemination of material on the production of organic inputs.
- Preparation and dissemination of material on the cost and benefits of certification
- Promotion at production and marketing level (Bhattacharyya, 2005).

At present, In India, there are six accreditation agencies approved by the Ministry of Commerce for organic produce certification as per the National Program of Organic Production (NPOP) which is mandatory only for export of organic products (Appendix 3.2). The accrediting agencies are: Agricultural and Processed Food Exports Development Authority (APEDA), Coffee Board, Spices Board, Tea Board, Coconut Development Board, and Directorate of Cocoa and Cashewnut. There is also an organic commodities Board at the national level and another at the state level (Uttaranchal Organic Commodities Board (UOCB). Besides, there are private (Indian and foreign) certification agencies for certifying organic farms. In 2005, major ones were SKAL, Indocert, Ecocert, IMO, SGS, Lacon GmbH, Uttaranchal State Organic Certification Agency, National Organic Certification Association, BVQI (India), and One Cert Asia (Subrahmanyam and Nagasree, 2005). (Kumar, *et.al.*, 2003) which are accredited by the above said six agencies. But, most of the Indian producers are certified by bodies accredited by EU, USDA and JAS not IFOAM and these standards do not have provisions for social justice unlike IFOAM which has recently introduced the code of conduct for organic trade. Further, until now, the focus of government policy on organic sector has been export driven (Raste, 2004).

The NPOP is very liberal as far as labeling is concerned. It recommends that: "When the full standards requirements are fulfilled, products shall be sold as 'produce of organic agriculture' or a similar description". Furthermore, they do not recommend use of in conversion labels as it may confuse the customer. However, if they are used, they should be clearly distinguishable from the label for organic

products. Mixed products (not all ingredients, including additives, are of organic origin) may be labeled in the following way (raw material weight):

- Where a minimum of 95% of the ingredients are of certified origin, products may be labeled "certified organic" or a similar description and should carry the logo of the accredited certification programmed.

- Where less than 95%, but not less than 70% of the ingredients are of certified organic origin, products may not be called "organic, but may be used in statements like "made with organic ingredients".

- Where less than 70% of the ingredients are certified origin, the indication that an ingredient is organic may appear in the ingredients list. Such a product may not be called organic.

These standards are based on and very similar to the US standards for processed organic grain and oilseed based products (Revoredo, 2004).

Further, organic products should not be labeled as GE (genetically engineered) or GM (genetically modified) free, in order to avoid potentially misleading claims about the end product. The logo "India Organic" will be used for certified organic products only if certified by a government approved accreditation agency (Mahale, 2002).

Further, APEDA has set up model organic farms and also facilitates group certification besides exporter meets and training programmes (Subrahmanyam and Nagasree, 2005).

NGOs in Organic Production and Marketing

Besides the state and many private players (Appendix 3.1), there are many non-governmental organisations which are promoting organic agriculture in various

ways. Table 3.10 shows the NGOs involved in organic farming related activity in Maharashtra state alone which had 1000 growers who were 100% organic with an area of 2500 hectares and 600 who were certified organic, and one lakh farmers who were partially organic with 2.5 lakh hectares of area. The major crops grown were cereals, pulses, cotton and oilseeds in that order (MOFF, 2005).

Table 3.10: NGO activity in organic farming and marketing sector in Maharashtra

NGO	Operational area	Activity
Maharashtra Organic Farming Federation, Pune	Maharashtra	Networking, advocacy, demonstrations, extension, documentation, certification, and marketing support
Gram Parivartan, Pune	Maharashtra	Documentation, publicity and technical support
AFARM, Pune and Latur	Maharashtra	Training
Gomukh, Pune	Maharashtra	Training, documentation and consultancy
Nisarg Sheti Mandal, Jamner	North Maharashtra	Training, extension and marketing
Dhule Jila Krushi Sangh, Dhule	North Maharashtra	Training and extension
Janseva Nyas, Kohlapur	Western Maharashtra	Training and extension
IRECED, Atpaadi	Western Maharashtra	Training and extension
VOFA, Yeotmal	Vidharbh	Training, certification and marketing
Yuva, Nagpur	Vidharbh	Training and extension
Dharamitra, Wardha	Vidharbh	Training and extension
Krushi Vidnyan Mandal, Nanded	Marathwada	Training and extension
Pani Panchayat, Pune	Pune district	Demonstration and training
Bhagirath Sangh, Sindhudurg	Konkan	Training and extension
Matru Mandir, Ratnagiri	Konkan	Trainng and extension

Source: MOFF, 2005.

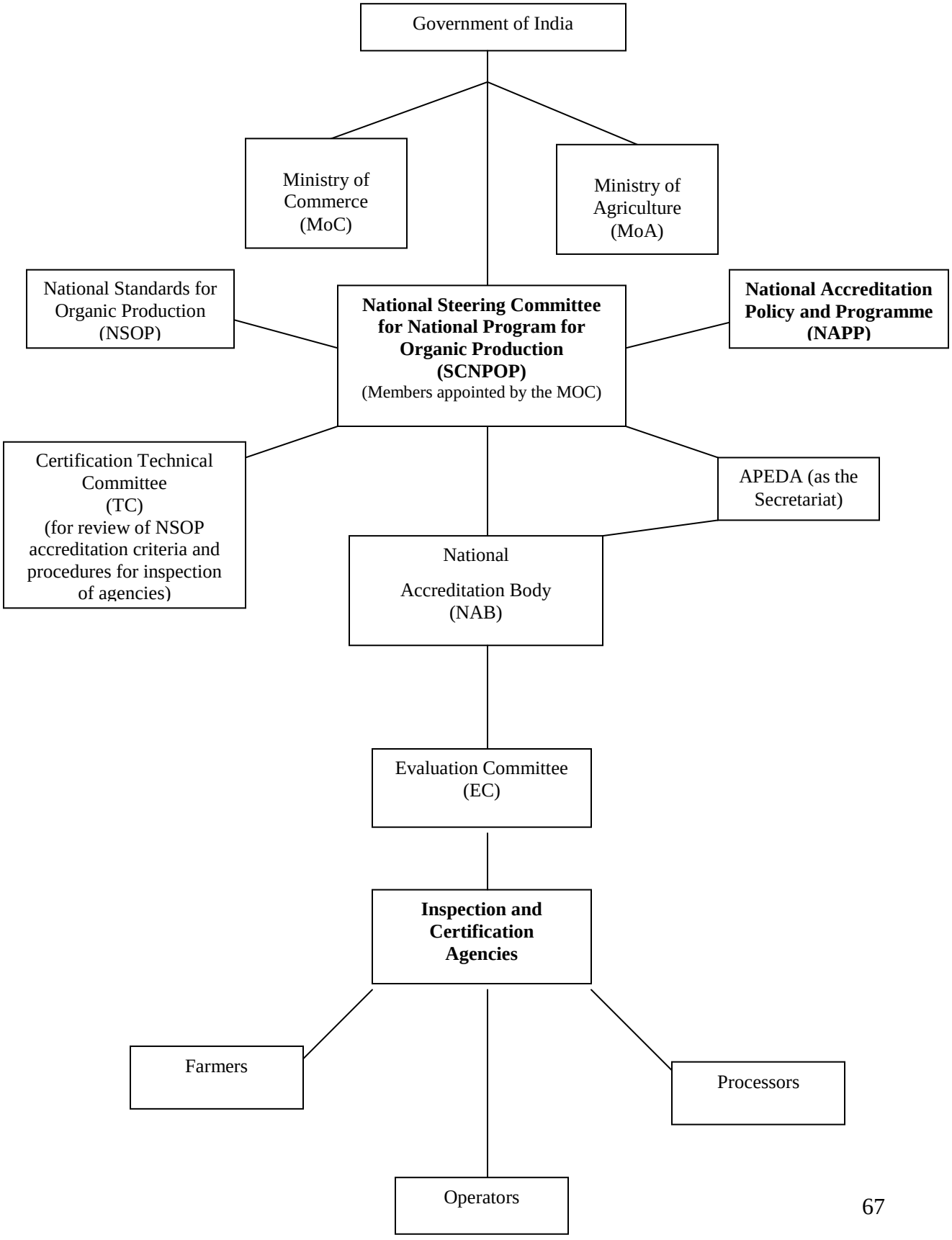
Appendix-3.1

Table: Indian Organic Products, Players and Markets (Domestic and Export)

Product	Players	Quantity (tons/y)	Season	Markets
Tea	Arya Tea Co. Ltd, Kolkata: Bombay Burmah Trading Corporation, Coimbatore; Chamong Tea Pvt. Ltd., Kolkata; Hindustan Lever Ltd., NIlgiri: Tea Promoters India, Kolkata	3500	Throughout the year	Domestic: Mumbai, Bangalore, Delhi & Hyderabad Export: Australia, Germany, Japan, Netherlands, UK, USA.
Coffee	Arogya Organic Coffee Cultivators, Chikmanglur Bombay; Burmah Trading Corporation, Coimbatore;	600	Monsoon (June to September)	Domestic: Bangalore, Chennai, Hyderabad, Mumbai and Delhi Export: Australia, Germany, Japan, Netherlands, Sweden, UK, USA.
Spices	Accelerated Freeze Drying Co. Ltd., Cochin; Cochin Spice Ltd., Cochin; Lotus Spice Ltd., Cochin; Peeremade Development Society, Idduki; Unicorn Natural Products Ltd., Hyderabad; Organic Spice Growers' Forum	700	Throughout the year	Domestic: Bangalore, Chennai, Hyderabad, Mumbai, Delhi Export: France, Germany, Japan, Netherlands, South Africa, Singapore, UAE, USA.
Rice	Indian Organic Food, Delhi; Ion Exchange Enviro Farms, Pune; Grewal's Organic Agriculture Farms, Sirsa; Agrocel Industries, Mandvi, Picric Ltd., Sonepat; Sunstar Overseas Ltd., Bahalgarh (Haryana), Satluj Organics, Delhi; Pciric Ltd. Delhi; Adat Farmers' Co-operative Bank, Trissur (Kerala)	3500	Kharif: April to September Rabi: November to February	Domestic: Bangalore, Chennai, Hyderabad, Mumbai, Delhi Export: Japan, Singapore, UAE, USA, Canada, Germany.
Wheat	Giraff International, Hissar; Grewals Organic Agriculture Farms, Sirsa; L & T Overseas Ltd., Bahalgarh; Sunstar Overseas Ltd., Bahalgarh.	1400	Kharif: April to September Rabi: November to February	Domestic: Mumbai, Bangalore, Delhi & Hyderabad, Export: Australia, Germany, Japan, Netherlands, UK, USA.
Pulses	Grewals Organic Agriculture Farms, Sirsa; Ion Exchange Enviro Farms, Pune; Pratibha Syntex Ltd., Indore; Fab India, New Delhi.	400	March to May	Domestic: Mumbai, Chennai, Bangalore, Delhi, Hyderabad Export: Japan, Singapore, Germany, UAE, Saudi Arabia.
Oilseeds	Enfield Agrobase Pvt. Ltd., Chennai; Grewals Organic Agriculture Farms, Sirsa; Ion Exchange Enviro Farms, Pune.	100	Kharif – April to September	Domestic: Negligible Export: European countries
Fruits & Vegetables	Grewal's Organic Agriculture Farms, Sirsa; Mahesh Agri Exim Pvt. Ltd., Surat; Ion Exchange Enviro Farms, Pune; IQF Foods Ltd., Bangalore; Namadharis Fresh, Bangalore; Picric Ltd., Sonepat; Fab India, New Delhi.	2500	Throughout the year	Domestic: Mumbai, Chennai, Bangalore, Delhi & Hyderabad Export: Australia, France, Germany, Italy, Sweden, Switzerland, Netherlands, USA, UK
Cashewnut	Narayan Ganesh Prabhu Zantye & Co. Goa; Trading Organic Association, Goa.	375	March to June	Domestic: Nil Export: European countries
Others: Cotton, medicinal herbs & extracts, aloe vera,	Pratibha Syntex Ltd., Indore; Agrocel Industries, Mandvi, Maikaal bioRe Pvt. Ltd., Mhow; Rohini Herbal, Chennai; Khadinge Plants and Herbs Pvt. Ltd.; Chetna project of Solidaridad and ETC Indiain AP; Oxfam in AP	Cotton 1200, Herbs 250		Domestic: Mumbai, Bangalore, Delhi, & Hyderabad Export: Australia, Belgium, Germany, Switzerland, Italy, Japan, Netherlands, UK, USA.

Source: Org-Marg, 2002 (Source: Fieldwork, Various Publications from – APEDA, Tea Board, Spice Board and Coffee Board) and own updation.

Appendix 3.2: Operational Structure of National Programme for Organic Production (NPOP), India (Source: Raste, 2004)



Chapter 4

Organic Produce Supply Chains and Small Producers: Governance, and Participation Issues

4.1. Introduction

The term 'Supply chain' was originally associated with classical multinational enterprises that were vertically integrated. But, now supply chain management has become relevant in situations in which there is more than one autonomous player. In such cases, there is often a dominant enterprise that uses its power to organize and plan the chain by involving customers and suppliers. Supply chain management involves an organizational or institutional perspective involving collaboration, business environment, power and trust; a performance perspective involving performance measurements and consumer behavior; and a process perspective involving process management issues such as costing, supply chain organization, targets, throughput time and decision making. Basically supply chain management is demand led i.e. the overriding criterion is the satisfaction of the client (Wolters, 2003). This chapter provides a conceptual and theoretical perspective on the supply chains in agribusiness from a governance and management angle in order to analyse the organic produce supply chains from a small organic producer/supplier perspective. Next section discusses the concepts and rationale behind this kind of analytical approach followed by governance issues in such chains in section 3. That is then followed by agribusiness supply chains profile in section 4 and the relevance and practice of contract farming to manage these chains in section 5. Section 6 examines the issues in functioning of such chains from a primary producer perspective and the chapter concludes with a section on sustainable supply chain management.

4.2. The Supply chain Framework

Collaboration between trade partners has become increasingly important for the success of international trade in competitive markets. Supply chain management is a powerful tool to achieve this collaboration. Supply chains not only benefit the company directly involved, they also stimulate social, economic and environmental

sustainable development in a country. Cross border supply chain development can stimulate the development of agro industry employment generation, local food production value addition, introduction of new technologies, reduced product wastage and improved food safety and nutrition besides export earnings. Cross boarder supply chain development seeks innovation in the agriculture sector on the one hand to foster a market-oriented agro system and to provide an arena for economical, social and environmental sustainable development. Three main market driving forces urge supply chain partners to collaborate i.e. market segmentation, consumer demand, and low cost strategy. For the developing country chain partners who wish to participate in global markets, supply chain collaboration is of great importance for the connection with profitable markets, flow of information, technology, capital and limited transaction cost. The above three forces respectively require chain differentiation, integral chain care, and chain optimization. Due to the issues of food safety environmental protection, and concern for animals and producers, all companies in the chain need to cooperate to obtain sustainability and avoid loss of consumer confidence. For this, integral chain care and quality assurance are the key.

A supply chain refers to different actors being linked from farm to fork to achieve more effective and market oriented flow of products. The supply chain may include growers, pickers, packers, processors, storage and transport facilitators, marketers, exporters, importers, distributors, wholesalers and retailers. In cross-border supply chains, where a part of the chain (input supplies to primary processing) is located in the developing country, the other part (food industry to consumer) is located in the developed country, supply chain requires lot of efforts and competence of those involved. The first step is analysis of adjusting trade systems and environment for a product. From this, supply chain players can be identified and their roles and relationships defined. A supply chain analysis also involves role of the chain leader and measuring performance according a set criteria by the chain partners and determining critical success factors which may involve a SWOT analysis. The development of supply chains requires knowledge and expertise about chains and within chains. The knowledge about chains is about chains strategy, chain formulation, chain organization, chain design, chain management and partnership. On the other hand, knowledge within chains is about chain marketing, chain logistics, quality assurance, information flows, added value, technology and integration.

Whereas knowledge about chains is essential to develop a workable structure, the knowledge within chains is essential for assuring sustainability. Key factors of success for supply chain development are partnerships and integration. Trust and commitment are crucial elements to achieve partnership and chain integration. Managing supply chains requires an integral approach in which chain partners jointly plan and control the flow of goods, information technology and capital from farm to fork and vice versa. Supply chain management results in lower cost and higher margins. Supply chain partnerships are based on interdependence, trust, open communication and mutual benefits. Various innovations in supply chain management include efficient consumer response (ECR), information and communication technology (ICT) and new generation cooperatives (NGCs) besides strategic partnering and vertical alliances which create more sustainable partnership in supply chain. The new requirements for quality and safety standards have led to new tools of integral chain care like Good Agricultural Practices (GAP), Total Quality Management (TQM) and Hazard Analysis and Critical Control Points (HACCP) which help track and trace supplies required by the retailers who have their private standards like Europ-GAP (Roekel et al, 2002).

The different levels (scale) and forms (ambition) of chain management can be local/regional, national, and international and ordinary, socially/environmentally responsible and sustainable respectively. The complexity increases with scale and ambition (Wolters, 2003).

The concept of supply chain has many variants such as commodity chain, value system, value chain, production network, supply chain, value network, 'complex' and 'filerie' approach which are also, sometimes, used interchangeably. A value system is a set of interlinked complete firms that have all the business functions (Gereffi et al, 2001). Alternately, a commodity chain is a network of labour and production processes whose end result is a finished commodity. It is the series of relations through which an item passes from extraction through conversion, exchange, transport, distribution and final use (Ribot, 1998). The concept of value chain was used in the 1960s and the 1970s by analysts for charting a path of development for mineral exporting economies and in the recent French planning literature in the form

of ‘filiere’ which has been applied mostly to agricultural commodities originating from former French colonies. The term ‘filiere’ refers to material flows through the agro-industrial food chain and consists of vertical, horizontal and diagonal linkages. It was only during the 1990s that the commodity chain concept has become widely used mainly because of the writings of Michel Porter, Womack and Jones, and Gereffi. There are three key elements of value chain analysis - barrier to entry and rent, governance, and systemic efficiency (Kaplinsky, 2000). The measurement of value in a chain involves looking at distribution of profits, value added, and price mark ups (Gereffi, et al, 2001). The value chains or production networks can range from local to domestic/national, regional, and global. The actors in a value chain can be integrated firms, retailers, lead firms, turn key suppliers, and component suppliers (Sturgeon, 2001). More specifically, a food network is conceptualized as a hybrid that comprises the inter relationships between the human actors in a commodity chain but extends to include the non-human intermediaries that bind the actors together in power relationships. The examples of non-human intermediaries include the farming contracts between farmers and processors, the national regulations that link farmers and processors, national policies and the international agreements that link MNCs to the WTO. This framework relies on Actor Network Theory (ANT) which stresses the importance of examining non-human elements that build a network (Arce and Marsden, 1993).

Global value or commodity chain analysis (CCA) highlights the levels of integration between suppliers, producers, and consumers for a given commodity. It helps to examine changing global commercial relationships between firms within the value chain in greater depth. By focusing on the nature of transactions between those operating within a supply chain, it provides a new perspective to the standard international trade theory. Whereas the trade theory is built on the assumption of trading partners meeting each other in free markets as independent agents, the value chain analysis facilitates an understanding of how tightly or loosely knit and how integrated or fragmented an entire chain or its links are. A value chain analysis requires distinguishing between different forms of governance and the reasons for their existence (Eapen et. al., 2003). Global CCA addresses the issue of who controls global trade and industry and how agents locked into lower value segments of trade and industry can breakout of this situation. The CCA is a method of analyzing how

and for whom such market conduits operate. It is a tool for understanding who benefits how, and how those patterns of benefit distribution can be changed. It has both empirical as well as theoretical focus on markets instead of formal abstract modeling. Secondly, it pays attention to power, its sources, uses, and effects in a socially differentiated environment. It is also an approach to politics and political institution as endogenous to the existence and functioning of markets with attention to differentiated market agents involved in collective action. Finally, regulation, both state and non-state is also an endogenous feature of markets (Ribot, 1998).

4.3. Governance in Supply Chains

Governance which is central to value chain analysis can be defined as non-market co-ordination of economic activities. The firms directly or indirectly influence the organization of global chains through the governance structures they create. Governance is nothing but the ability of a firm in the chain to influence or determine the activities of other firms in the chain. This can include defining the products to be produced by suppliers and specified processes and standards to be used. The value chain governance involves specification of key parameters of business like what is to be produced how, when and how much and at what price (Gibbon, 2001). However, the issue of governance also refers to the key actors in the chain that determine the interfirm division of labour and shape the capacities of participants to upgrade their activities (Gereffi, 2001). Chains differ significantly with respect to how strongly governance is exercised, how much concentrated it is in the hands of a single firm and how many lead firms exercise governance over chain members (Gereffi, et al, 2001). Governance within a chain implies that some firms in the chain set and enforce the parameters that others in the chain follow including quality standards.

Governance is also needed because the buyer has a better understanding of the demands of the market and of the risks associated with noncompliance with standards (Eapen et. al., 2003). Governance is required when the supplier lacks technical competence or market knowledge. The positioning of a product in the chain, which involves quality, consistency, variety, processing, packing, reliability, and price, requires governance (Dolan and Humphrey, 2000). The issue of governance in value chains assumes importance due to reasons of market access far developing countries

in the new trade regime, fast track to acquisition of production technologies, distribution of gains, leverage points for policy initiatives, and a funnel for technical assistance. Governance is not a necessary feature of value chains. The global chains can be producer-driven or buyer-driven in term of their internal governance (Gibbon, 2001a). In the former case, the key parameters are set by firms that control key product and process technologies whereas in the latter, the key parameters are set by retailers and brand name firms which focus on design and marketing, not necessarily possessing any production facilities (Humphrey and Schmitz, 2001).

The concept of governance in global commodity chains helps to examine how the competitive strategies of the global buyers have led to particular governance structures that determine not only the type of products to be produced but also production and quality systems and the extent and location of post harvest processing, and the structure of raw material supplying sectors in developing countries. Even, organic agriculture and integrated pest management have increasingly become objects of governance. Entry into international market brings expectations food safety, environmental loss, over production, animal welfare concern, declining number of family producers, and farm workers into the domestic sector as well (Heron, 2003).

An important question in agro-commodity chains is how to devise mechanism of regulation that can make upgrading opportunities more socially broad based and how to devise way of insuring that the rewards from meeting these opportunities become more predictable (Gibbon, 2001). The issue is not whether to participate in the global commodity chain but how to do it in a manner that leads to sustainable and equitable income growth (Kaplinsky, 2000). Too much reliance on those at the head of the buyer-driven chain for design, technical and marketing assistance may trap exporters and producers into low-level production roles (Tewari, 1999).

The other important questions of governance outside the chain are: what is the role of government agencies and other external forms of regulation in determining both product and process parameters in value chains; to what extent there is a trade off between co-ordination and control within the chain, and use of external agencies to certify and regulate firms. Even the question of power relationships within a chain has not been given enough prominence in the discussion on chain dynamics (Gereffi,

et. al., 2001). The division of labour within value chains and the nature of network linkage i.e. connection mechanism, governance style, and power dynamics, are important research questions (Sturgeon, 2001).

4.4. Supply Chains in Agribusiness

The producer-driven governance structure in global value chains in agri-business emerged during the early 20th century, more in the form of vertical integration by Trans-National Corporations (TNCs) (Gereffi, 2001). In terms of institutional structure, most of the functions in agro-commodity chains were earlier performed by state's export marketing monopolies who exercised co-ordination through control over prices of both capital inputs and output. But, these organizations co-ordinated only horizontally and the vertical co-ordination was performed by a small number of international trading and brokering companies. This co-ordination during 1930-1990 was mainly of an arms-length type.

Since 1990, there has been a partial disintegration of agro-commodity chains and their reconstitution in new forms. There now appears to be a much greater degree of filamentation of chains and a greater diversity in the principles governing their organization. The institutional structure of these chains has also changed so far as governance is concerned, as states no longer play the role of co-ordinator of production in agriculture in developing countries. Private agents have taken over these functions on a localized basis in a few places where they enjoy monopolies, for example, through contract farming schemes. Vertical co-ordination by international traders in arms-length forms persists but has become more important and is accompanied by more direct forms of vertical co-ordination. The new international regulation of food exports has made the monitoring of food chains increasingly costly and, therefore, buyers have started adopting measures, which transfer these costs to the producers in many buyer-driven commodity chains (Gibbon, 2001).

Agri food supply chains are more concerned with control of food quality and safety and supply variability which is unique to this sector. Perishable goods like food require a time efficient supply chain even if rapid delivery is costly. Seasonality of agricultural production can affect supply chain approaches. Inter firm information and

information network allow companies to manage supply sources and distribution network without owning them (Salin, 1998). Two important features of globalization are the reduction or removal of restrictions in time and space (e.g. in the form of national frontiers) and the attention that is drawn to the potential negative consequences (for example, child labour and environmental aspects) of the internationalization of production processes (Verhagen, 2004, pp.11-12).

The deregulation in agriculture sector has typically been accompanied by re-regulation elsewhere within the sector especially in the area of diet, health, and the environment. The 'globalisation' of agro-food sector is quite problematic and confusing. The food industry is now characterized by intra firm, vertically integrated, transnational production systems. The food companies do not centrally coordinate global intra-firm divisions of labour involving global outsourcing. Rather, they are multi-national, multi-domestic in their operations. Most of the time, their production is locally based (Rossett et al., 1999). The need for governance within the chain by internal and external stakeholders arises from the need for product differentiation; difficulty for the developing country producers to meet developed country market standards; and increased concern with labour, environmental, and product safety standards either due to legal obligations or consumer, government or NGO pressures (Dolan and Humphrey, 2000).

The regulation of global supply chains has its rationale in market failure and the divergence between public interest and the private actions of key stakeholders in global trade that leads to negative externalities of trade. But, most of the time, the regulation by the state was ineffective due to regulatory capture and hold up by the powerful groups, implementation failure and entrenchment of the vested interests in state bureaucracy. Wherever regulation was effective, it led to negative effect on workers in the south like loss of livelihoods and their being pushed into worse occupations and crime. Ethical trade arose from 'something else' instead of state regulation of chains or no regulation at all. This is paraellel to 'improved state regulation' of chains. The incentives and penalties in ethical trade fall into categories of: economic gain, avoidance of economic loss, social benefit, avoidance of social disadvantage, politico-legal benefit and avoidance of politico-legal disadvantage. But, it is more of actual incentives and threats like threat to formally regulate, consumer

boycott, or promise of greater market share which motivate chain drivers to adopt ethical trade practices and pre-empt regulatory threats. Various mechanisms to apply these incentives include contracts between buyers and suppliers, rules and codes like UK Ethical Trade Initiative's model code or SA8000, informal agreements in the form of promises, peer actions in terms of decisions by associations, supply side pressures, demand side pressures, and information flows. There are also cases of self-regulation (codes of conduct) and co-regulation (state and self-regulation) besides state regulation in ethical initiatives. But, the impact of ethical trade regulation is not possible to assess due to lack of research, esp. impact research, and that too good impact research. But, still, impact can be assessed by pre-implementation measures i.e. existence of regulatory instruments, extent of regulation, expedience of regulatory goals in terms of being appropriate for social/environmental needs; and post implementation measures i.e. effectiveness, efficiency, and externalities. For example, in some sectors, measures tend to exist only for export produce, not domestic market production (existence), or cover only some issues in parts of the supply chains (extent). Effectiveness can be seen in reduction of child labour in carpet industry in India due to self-regulation in the form of Rugmark label but labeling has been criticized as a marketing tool to help only multinational companies. Further, there are design related and institutional issues in ethical trade initiatives. Major challenges in regulation and governance of supply chains include: a growing divergence in interests of stakeholders, a shift in power from producers to intermediaries, increase in information asymmetries, growth in indirect mechanisms of control, a decline in trust, and growth in risk. Therefore, suggestions for successful ethical trade include: matched design, incentives, enabling processes, asymmetry reducing actions and mechanisms for learning and improvement (Heeks and Duncombe, 2003).

Global standards make compliance difficult and costly. Failure can mean losing access to key markets. Also, compliance costs can be high in terms of improvements in production and management practices and the potential loss of competitive advantage such as cheap labour. For example, in the UK, the new standards of the EU on MRL (2001), The Eurep GAP and HACCP adoption by the supermarkets, and the UK Ethical Trade Initiative (ETI) promoted by the government have made access to the UK market more difficult for developing country exporters and producers (Humphrey et al, 2004; Barrientos and Kritzinger, 2004). On the other hand, gains

from standards can be significant for labour and the environment, improving efficiency and working conditions, raising competitiveness and market access, and providing a way out of the race to the bottom (IDS, 2003).

Trade in labour intensive products, produced largely by developing countries, is organised by a few global buyers who work for or act on behalf of major supermarkets or global retailers. This has meant that the access of the developing countries to enter the developed world markets is dependent on their ability to enter these global value chains or production networks of lead firms. Understanding how these chains are organized, controlled and governed is key to understand how gains from these networks and chains are shared across the chain participants (Eapen et al, 2003).

Global value chains allow the supermarkets to operate without incurring the high costs and risk of ownership of facilities or franchising, and lower transaction costs but still retaining global access to supplies. The buyers (supermarkets) in these chains dominate and govern quality through production standards (Barrientos and Kritzinger, 2004).

4.5. Contract Farming (CF) in Agri Supply Chains

CF can be defined as a system for the production and supply of agricultural and horticultural produce by farmers/primary producers under advance contracts, the essence of such arrangements being a commitment to provide an agricultural commodity of a type, at a specified time, price, and in specified quantity to a known buyer. In fact, CF can be described as a halfway house between independent farm production and corporate/captive farming and can be a case of a step towards complete vertical integration or disintegration depending on the given context. It basically involves four things - pre-agreed price, quality, quantity or acreage (minimum/maximum) and time (Singh, 2002).

CF is known by different variants like centralised model which is company farmer arrangement, outgrower scheme which is run by government/public sector/joint venture, nucleus-outgrower scheme involving both captive farming and contract farming by the

contracting agency, multi-partite arrangement involving many types of agencies, intermediary model where middlemen are involved between the company and the farmer, and satellite farming referring to any of the above models (Eaton and Shepherd, 2001; GoI, 2003). In fact, CF varies depending on the nature and type of contracting agency, technology, nature of crop/produce, and the local and national context.

The contracts could be of three types; (i) procurement contracts under which only sale and purchase conditions are specified; (ii) partial contracts wherein only some of the inputs are supplied by the contracting firm and produce is bought at pre-agreed prices; and (iii) total contracts under which the contracting firm supplies and manages all the inputs on the farm and the farmer becomes just a supplier of land and labour. The relevance and importance of each type varies from product to product and over time and these types are not mutually exclusive (Hill and Ingersent, 1987; Key and Runsten, 1999). Whereas the first type is generally referred to as marketing contracts, the other two are types of production contracts (Scott, 1984; Welsh, 1997). But, there is a systematic link between product and factor markets under the contract arrangement as contracts require definite quality of produce and, therefore, specific inputs (Scott, 1984) Also, different types of production contracts allocate production and market risks between the producer and the processor in different ways.

For different reasons, both farmers and farm product processors/distributors may prefer contracts to complete vertical integration. A farmer may prefer a contract which can be terminated at reasonably short notice. Also, contracting gives access to additional sources of capital, and a more certain price by shifting part of the risk of adverse price movement to the buyer (Hill and Ingersent, 1987). Farmers also get an access to new technology and inputs through contracts which otherwise may be outside their reach. For a processor or distributor, contracts are more flexible in the face of market uncertainty, make smaller demands on scarce capital resources, and impose less of an additional burden of labour relations, ownership of land, and production activities, on management (Buch-Hansen and Marcussen, 1982; Kirk, 1987). The firm even gets an access to unpaid family labour (White, 1997) and can make use of state funds indirectly through agricultural production sector which are directed at farmers by development agencies (Clapp, 1988). Also, food processors can minimise their overhead costs per unit of production by operating their plants at or near fully capacity as contracting gives

assured and stable raw material supplies from farms. The firm can also project an image of working with local producers as a partner when it undertakes CF and may even obtain statal and international agency incentives for its activities as developmental projects, instead of corporate farming (Kirk, 1987).

At more macro economic level, contracting can help to remove market imperfections in produce, capital (credit), land, labor, information and insurance markets; facilitate better co-ordination of local production activities which often involve initial investment in processing, extension etc.; and can help in reducing transaction costs (Grosh, 1994; Key and Runsten, 1999). It has also been used in many situations as a policy step by the state to bring about crop diversification for improving farm incomes and employment (Benziger 1996; Singh, 2000). CF is also seen as a way to reduce costs of cultivation as it can provide access to better inputs and more efficient production methods. The increasing cost of cultivation was the reason for the emergence of CF in Japan and Spain in the 1950s (Asano-Tamanoi, 1988) and in the Indian Punjab in the early 1990s (Singh, 2000).

From an institutional economics perspective, the logic for CF could also come from the creation of positive externalities like employment, market development or infrastructure, if agribusiness firms create them better than the open market or the state (Key and Runsten, 1999). In other words, can CF help people other than those who have direct stakes and pay for it?. CF figures as an institutional arrangement for agricultural development in the fields of inputs, product exchange, and product upgrading, the last referring to research and innovations (Christensen, 1992).

Some others recommend CF as the only way to make small scale farming competitive as the services provided by contracting agencies can not be provided by any other agencies (Eaton and Shepherd, 2001). Contract faming also lowers transaction costs for the farmers as many of the transactions are internalised by the procuring firm (IFPRI, 2005). CF is also an alternative to corporate farming which may be costly, risky, and difficult to manage and still not viable (Payer, 1980). CF has various models/variants being practiced in India at present (see Appendices 4.1, 4.2 and 4.3).

In some of the chains, small producers have also been involved through the mechanism of contract farming and preferred suppliers and informal farmers' associations. Some of the factors for successful chain development and management include: development of trust, commitment and transparency among partners, joint planning and control, awareness and training to tackle bottlenecks, public-private partnership initiatives, leadership of a private company, and a limited number of chain partners besides the fact that power should not be concentrated in one chain partner. On the other hand, some of the risks in supply chain development include: social and cultural differences, hidden agenda of some partners, personalized chain collaboration and selecting preferred suppliers, excluding small growers. The government can facilitate supply chain development by setting product and production standards, incentive structures, creating infrastructure, and providing information about a market and enforcing property rights. There are also cases of public, private partnership to develop agri supply chains (Roekel et al, 2002).

4.6. Organic Produce Supply Chain Governance and Small Producers

There have been studies on the governance of conventional supply chains in India e.g. in cashew (Eapen et al, 2003), and fruits and vegetables (Deshingkar, et. al., 2003; Singh, 2002; Singh, 2003) which provide evidence on the exclusion of small producers by these chains. The newly emergent organic produce supply chains across the globe have also been found to be excluding small producers due to reasons of high certification costs, smaller volumes they produce, and tighter control by the chain leaders in the absence of any local market outlets for the organic producers (Raynolds, 2004). It is in this context that this chapter examines the governance and participation issues in supply chains and examines the prospects of including the marginal and small producers into these chains if the organic sector has to play its developmental role.

This mainstreaming of organic foods has serious implications for the governance of domestic and international supply networks. Organic products sold in alternative outlets continue to come from small local producers, and those in mainstream markets are typically sourced via conventional distribution chains which uphold industrial and commercial conventions routed in efficiency, standardization, and price

competitiveness. The parallel thriving of alternative organic distribution systems alongside super markets has brought in a bifurcation in the organic systems (Raynolds, 2004).

It is often assumed that small scale producers will be the ones to participate in expanding organic export sector due to organic farming being labour intensive in nature and its compatibility with traditional peasant practices. But, farm output cannot be exported as organic unless producers uphold official organic documentation, auditing, and certification procedures. Organic certification imposes bureaucratic and industrial conventions which typically counter the traditional norms and practices of small farmers (Raynolds, 2004, 736). This creates a major barrier for small scale producers wishing to enter organic export networks and take advantage of organic price premiums.

Further, because organic products increasingly enter the same commercial networks as their conventional counterparts, they are similarly affected by economies of scope and scale. Additionally, due to the lack of local market alternatives, small number of distributors, and rigorous chain of custody requirements, small scale producers entering organic export networks are subject to tighter control by distributors than producers of conventional products (Raynolds, 2004, 737). Certification represents a powerful new form of network governance which is routed in social, legal and bureaucratic institutions but serves in many ways to accentuate traditional economic inequalities between firms and countries. The only alternative to reduce barrier to entry for small producers is to reduce certification cost and empower local producers to fulfill monitoring tasks (Raynolds, 2004).

Another important issue is: do farmers indeed benefit from organic certification? All operators in the supply chain, for example, between the producers and the European supermarkets, such as organic inspectors, certification bodies, officers, intermediaries, exporters, take a share of the profit. It is estimated that 44% of the total benefit from organic is farmer premium, 20% certifiers' earnings, 19% field officers' earnings and 18% exporter profit. Thus, approximately half of the organic premium on exported produce goes to farmers. From this, it can be assumed that farmers do receive a reasonable proportion of the organic premium. Some obstacles that prevent

developing countries from accessing markets in the industrialized countries are of a political nature and stem from a protectionist policy. A second key question is: Can the poor remain competitive and how? Farmers can remain competitive, provided that certain conditions are in place. One important condition is that they are linked to an organized growers' group, with a central handling facility and sufficient economy of scale to reach the market. Another decisive factor is that producers of organic produce must be well linked to a marketing chain and be able to ensure reliable and good quality supplies. At the moment, supermarket distributors clearly favour large commercial suppliers over small farmer producer groups. However, because small-scale organic farmers are generally already organized, they may have a comparative advantage over conventional smallholder farmers. Market information also is a crucial factor for smallholders to be able to capture emerging organic markets in different parts of the world (Stoll, 2002).

The effective participation by small holders in markets requires access to information, to logistics of packing, transport and storage, access to working capital and ability to take risk. But, there are aspects of farm product markets like diversity in product type, heterogeneity in products, importance of identity preservation and traceability, price discovery, fragmentation, transaction velocity, and non-value adding transaction costs which need to be understood. This will require information on locating markets, identification of market players, existing market institutions, safeguards against monopolistic power, managing transaction cost, price discovery, and trends in demand pattern. This should be backed up by services like grading, pooling, packing, storage, transport, choice of market, quality assurance, and payment recovery. There are large number of agencies reaching out to small farmers in linking them up with the market, like corporate bodies, NGOs, cooperatives, groups of producers and individual service providers (Phansalkar, 2004).

4.7. Sustainable Supply Chain Management

Sustainable development involves three main aspects of productive activity-economic, social and environmental. In this context, sustainable chain management means working towards enhancing the social and environmental performance as well as the economic performance (quality) of the processes that are necessary to grow, process,

transport and sell a product. This makes it possible for organizations at different links in the product chain to work together to create a sustainable product and bring it to the market. There are cases of NGO activity helping to create separate market niches for social and environmental products which benefit small farmers and manufacturers and at the same time, prove that different more sustainable modes of doing business are possible. But, the important issue is that of their mainstreaming i.e. the adoption of sustainability standards by large manufacturers and sellers of those products which originate in developing countries. This means not only increasing the standards that developing country, small producers have to meet but also actively enabling them to achieve such standards. In sustainable chain management the upstream producers make direct contact with the final purchasing company without involving intermediaries. Product quality is a key issue in such a relationship (Wolters, 2003).

Sustainable chain management maps out the economic, ecological and social effects that occur during the life cycle of a product and focuses on measures that improve the sustainability of people, planet and profits and, therefore, goes beyond being socially responsible or environmentally responsible. There is no 'quick fix' for sustainable chain management. Yet, the importance of international sustainable chain management will increase in the future. This development is, on the one hand, caused by globalization and, on the other hand, by the creation of new rules to which companies (have to or want to) adapt within the framework of Corporate Social Responsibility (CSR) or Sustainable Business. Sustainable chain management is an instrument to put CSR into practice. (Inter) national legislation and codes of conduct related to social and ecological aspects of products and production processes increasingly require companies to have more insight into what happens elsewhere in the chain. Companies have to also deal with the concerns of consumers effectively. This can be related to the quality of the products themselves, but also to the social and ecological circumstances under which products are manufactured.

This type of chain management is primarily 'the success of working together'. Through cooperation, the chain partners (producers, processors, retailers, external stakeholders like the NGOs and government, etc.) are able to achieve much more than they could working alone. Sustainable chain management assumes that the chain partners no longer feel responsible for just their own part of the chain, but for the

whole chain. Usually, the involvement of a broader category of stakeholders - government bodies, NGOs, consumers and research institutes - is needed or required. International sustainable chain management is therefore a process in which a large number of widely differing players are involved. All the players have their own interests, motives and agenda. This imposes demands on the cooperation process. The instruments of sustainable chain management include codes of conduct, certification schemes, and sustainability reports on the social and ecological aspects of doing business (Verhagen, 2004, p. 17-18). Sustainable chain management must not disrupt the culture and lifestyle of local people, but should emphasize the importance of creating shared ownership. An effective combination of local and global is required (Verhagen, 2004, pp.19-22).

Sustainable chain alliances can help small-scale food producers in developing countries, for example, to improve their social security and can also alleviate consumer concerns about food safety, because product chains will become more transparent (Verhagen, 2004, p.9). For (small-scale) producers in developing countries access to (international) markets is an important motive for participation in sustainable chain management. It offers an opening for a better or fixed price for their products. Cooperation with permanent chain partners gives them more social security and in this sense, fits in with their survival strategy. The benefits that other chain partners can receive in this respect stem from the fact the anonymous suppliers who depend on whims of the market become, in sustainable chain management, co-developers. Their contribution obtains more equality, but is also essential for an improved price–quality ratio of the end product. This subsequently enables the producers to earn more money.

The experiences of Fair Trade show that it does not really matter where value is added as long as small-scale producers also benefit from the process. This implies building in guarantees to ensure that the interests of small scale producers are represented elsewhere in the chain. This can, for example, be expressed by eliminating middlemen, agreeing long term fixed prices to give producers certainty and by giving agricultural cooperatives access to and/or a financial interest in the (retail) companies at the other end of the chain.

The NGOs can increase their impact by moving on from anti-company campaigns to developing market expertise and thus influencing and focusing on entire sectors of industry. This would inevitably mean that they intervene "higher up in the system, reframing markets to reward positive behavior and to penalize negative behavior, which would lead to more fundamental changes within companies and value chains. This context makes international sustainable chain management an interesting work area, in which NGOs could initially function as whistle-blowers criticizing the social or ecological policy of companies. Subsequently, they could show companies the way to new markets for sustainable products, such as sustainability produced tropical wood. This could lead to sustainable chain management project that are facilitated and, to a certain extent, legitimized by NGOs. The latter is important in convincing consumers to buy the sustainable (end) products.

From a company's perspective, bringing in an NGO is, at very least, highly recommended. Strong local NGOs in developing countries can play the role of 'watch dog' providing incentives for and influencing the process of sustainable economic development. They can also play a role in mediating between local knowledge and (traditional) norms and values on the one hand and global markets and multinationals on the other hand. Furthermore, local NGOs in developing countries are often trusted locally.

But, new marketing concepts are needed for sustainable goods in order to tap into the unused potential of socially-aware consumers. If sustainable products are sold on the basis of purely ethical motives, they will only reach a small niche market of socially aware consumers. Fair trade also seems to be adopting this strategy. The image of the new line of clothing of this organization is trendy instead of being primarily for charity. The quality, image and mark justify the more expensive price. The objective is to ensure that sustainable products can hold their own on the 'normal market' (Verhagen, 2004).

Appendix 4.1

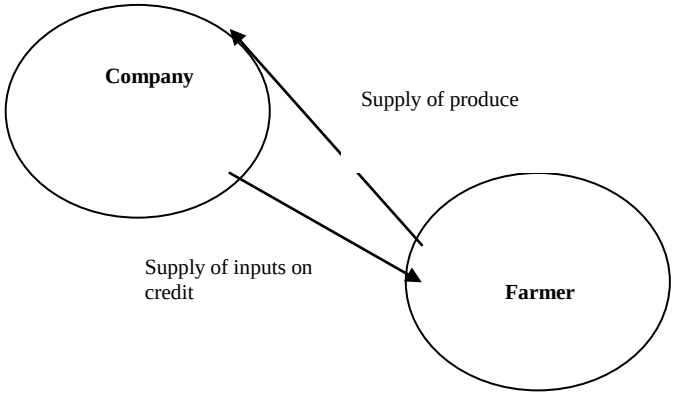


Fig.1: Bi-partite CF model

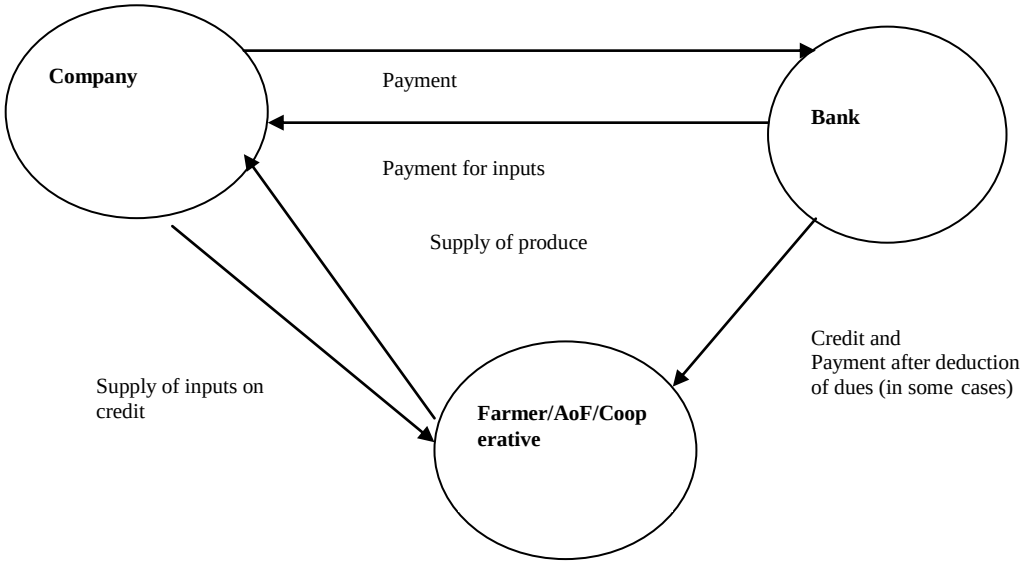


Fig 2: Tri-partite CF model (with bank linkage)

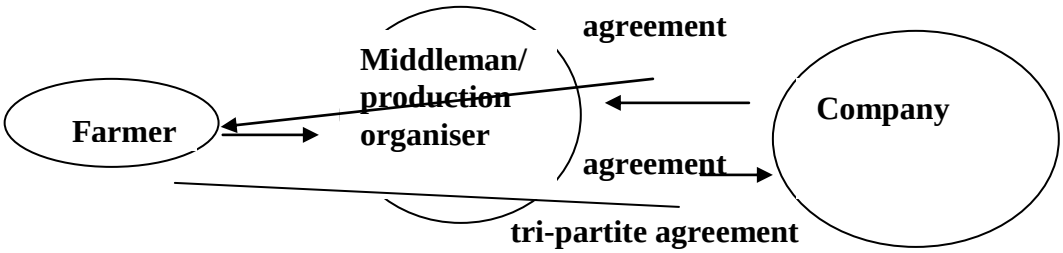


Fig.3: The Intermediary model

Appendix 4.2

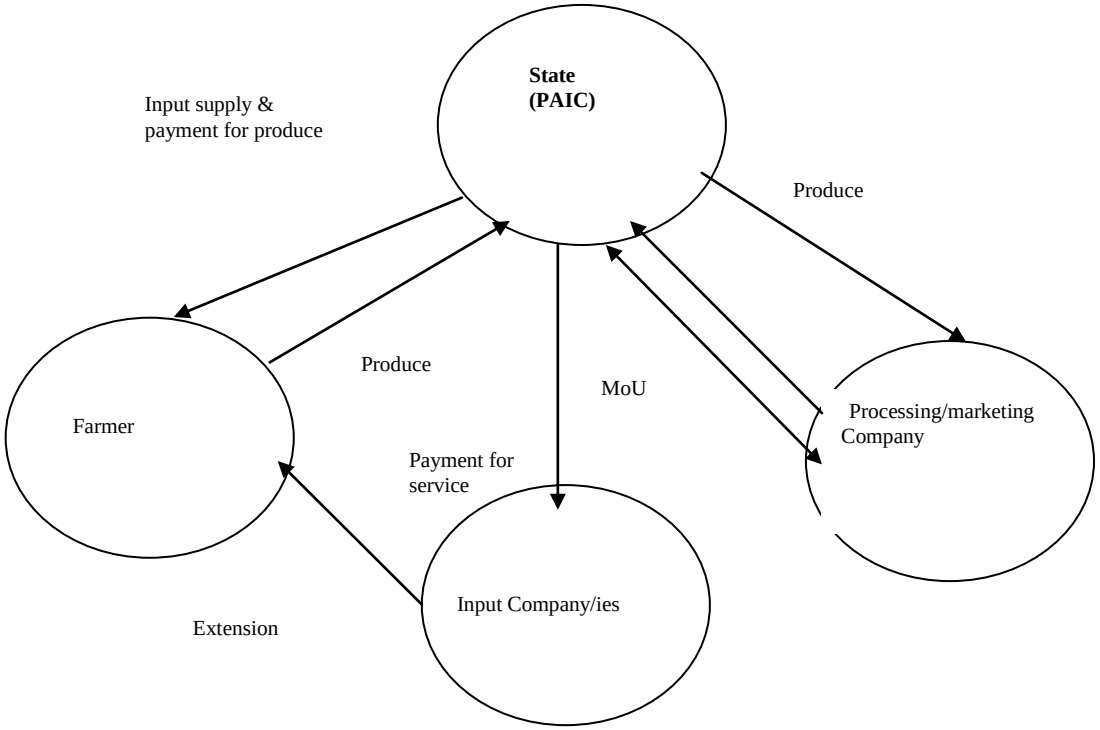


Fig 4 State-led contract farming system in Punjab

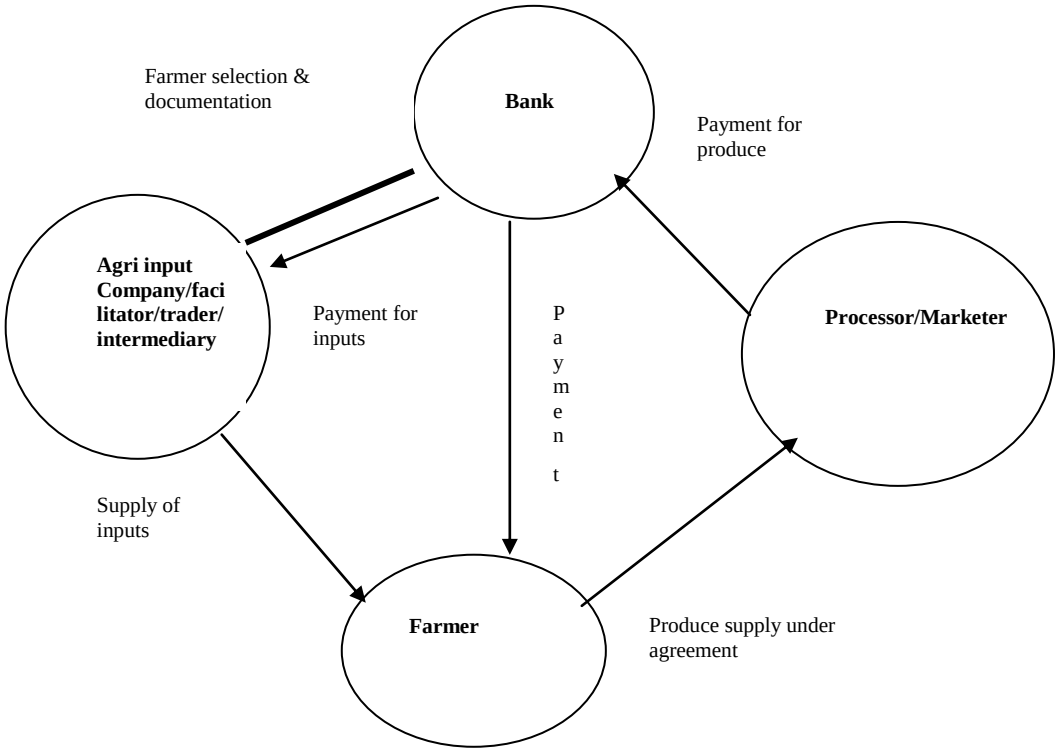


Fig 5 The Quad-partite CF model

Appendix 4.3

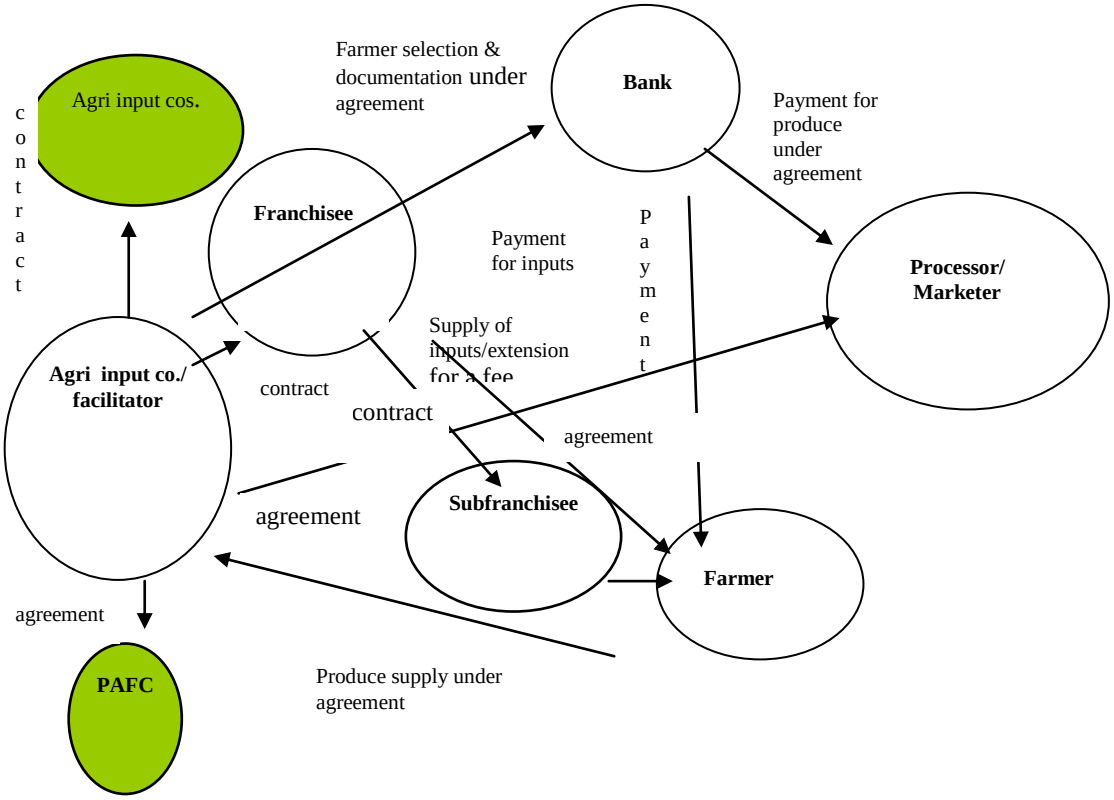


Fig 6 The six-partite (networking) CF model

Appendix 4.3

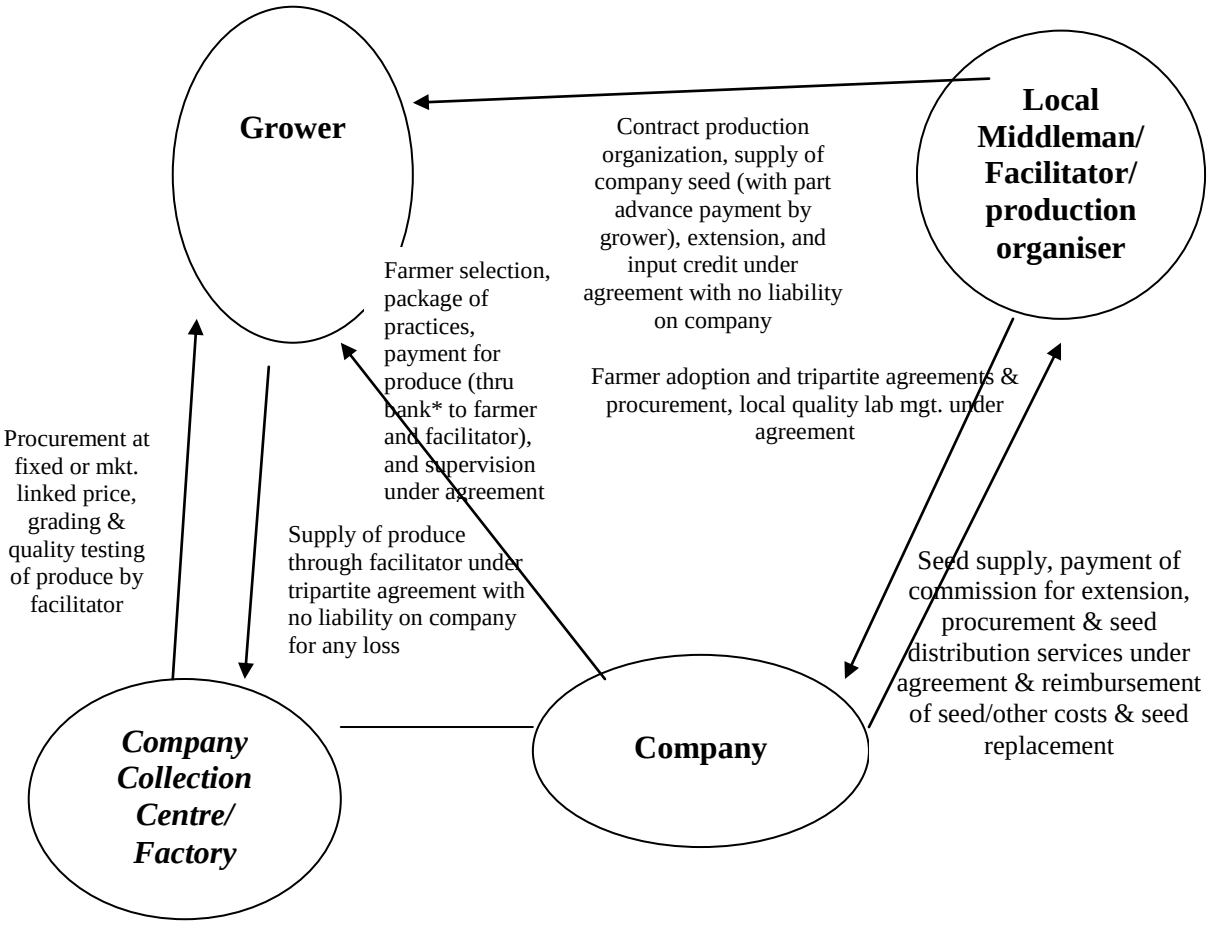


Fig. 7: Tri-partite (Intermediary) model of contract farming

Chapter 5

Organic Cotton Projects in India – Organisation and Issues

5.1. Introduction: Cotton in India

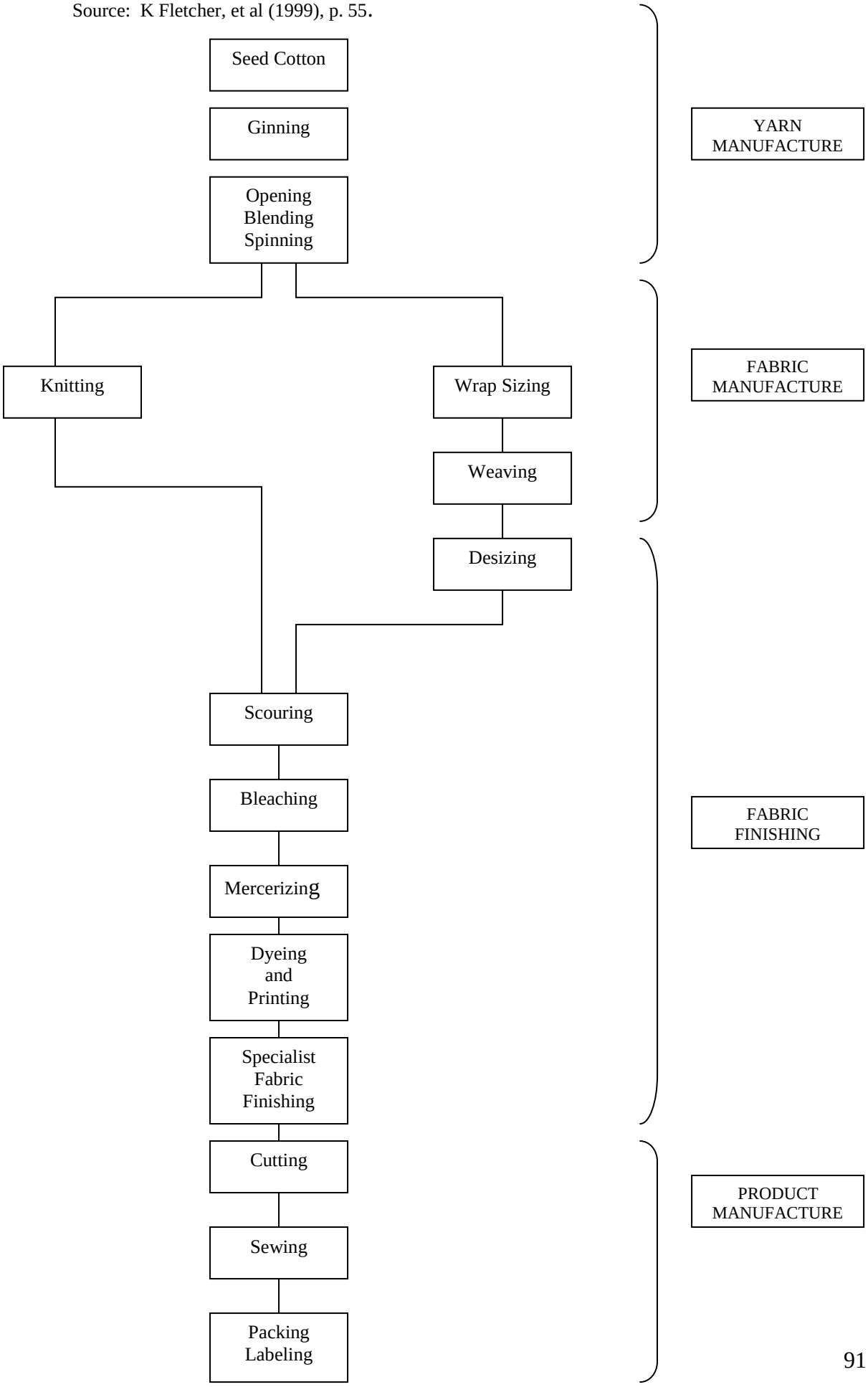
Cotton assumes great significance as nearly one-third of India's export earning is from textile sector and cotton alone constitutes 60% of the raw material used in this sector. The share of cotton in world textile manufacturing is around 45% where as it is around 70% in India. India exports cotton in value added forms, i.e. yarn, cloth and ready-made garments and ranks third in global cotton production after USA and China (Fig. 5.1). The yield of cotton in India is one of the lowest at 440 kg per hectare against the world average of 721 kg per hectare (2004-05). The area under cotton cultivation in India is 21% of world but in terms of production, it accounts for 13%. Cotton plays a major role in India's economy, both in terms of providing employment directly to about 60 million people, and in terms of production of wealth and earning foreign exchange for the country. About 65% of cotton grown in India is rainfed. In the last five years, India's cotton production has fluctuated significantly. The gap in domestic demand and supply was met, on many occasions, by imports (Directorate of Cotton Development, MoA, GoI, Mumbai).

Cotton and Pesticides- rationale for organic cotton

About 54% of the total pesticides used in Indian agriculture are used on cotton alone, though it accounts for only 5% of the total cultivated area. On an average, Indian farmers cultivating cotton spend roughly Rs. 500 crore on seeds, around Rs. 500 crore on fertilizers and almost Rs. 2500 crore on pesticides every year. Spraying lethal pesticides on cotton has taken its toll of human life e.g. in 2001 in Warangal district, there were 12 deaths and over 40 persons were affected by exposure to pesticides while spraying cotton. Maharashtra, and Gujarat alongwith M.P. and Andhra Pradesh are major producers of cotton in India accounting for more than 75% of area under cotton and 66% of production as of 2004-05. These are also major growers of Bt cotton now in that order. Erratic rainfall, poor or spurious quality seeds, deteriorated soil structure and increasing pest attack have led to crisis in cotton farming in India.

Figure 5.1: A view of cotton supply chain

Source: K Fletcher, et al (1999), p. 55.



Hundred of small and marginal cotton farmers have committed suicide in Maharashtra, Punjab, and Andra Pradesh during the past 10 years, and continue to do so every year (Menon, 2003).

5.2. Organic Cotton – an international perspective

Globally, clothing is (after agriculture) the most trade regulated of all sectors (Gibbon and Thomsen, 2004). There have been major changes in the opportunities available to developing country clothing industries like phasing out of MFA, new global value chains and new upgrading opportunities in the form of services, volumes, and processes and products. The global retailers use a variety of channels to source materials which include direct from overseas manufacturers, agencies, importers, trading houses, and converters. By direct sourcing, retailers aim to increase margins by cutting out intermediaries, to reduce lead times and to better control for product quality and contract compliance though it involves significant investments in foreign countries in screening suppliers, negotiating with them and monitoring production. But, most of them have attempted supply base reduction more recently in terms of number of suppliers and they now expect suppliers to provide new services like full fabric sourcing, design services and supplier-managed inventory. Most of them also refer to their suppliers as partnership or a semblance of that, mutual obligations, and exchange of business information (Palpacuer et al, 2005).

Organic apparel is one of those businesses in which everyone seems to know each other. Moreover, because of the unique requirements, higher costs and the sometimes itinerant supply of organic cotton, many in the industry have developed completely vertical operations from field to finished product, which ensures compliance and supply while also keeping costs low enough to make the organic apparel business profitable (Speer, 2005). Projects and experiments on organic cotton were taking place in a wide range of settings in more than 17 countries in North America, Latin America, Asia, Australasia, Africa and Europe during the late 1990s (Myers and Stolton, 1999). An estimated 14,000 tonnes of organic cotton was produced in the world during 1999-2000 with Turkey being the largest producer followed by the USA and India with India's production being 1169 tonnes of lint. By the late 1990s,

certified organic cotton was grown in 15 countries with significant production coming from Turkey (29%), the USA (27%) and India (17%). Organic thrust in cotton was the result of:

1. environmental regulation in intl. trade in textile for companies
2. benefits of trade for developing world if they can adapt to new demand
3. organic as a strategy in competitive textile market
4. consumer response and demand
5. producer interest and benefits (Myers, 1999)

Evolution of organic Cotton

In 2003, 55 million pounds of pesticides were sprayed on cotton alone. Cotton is one of the most heavily sprayed crops in the world, according to the Organic Trade Association. Although it represents less than 3% of the world's agriculture, cotton uses more than 25% of the world's chemical insecticides and more than 10% of the world's chemical pesticides, many of which can cause cancer, birth defects and/or nervous system damage or are known carcinogens. It is estimated that only 0.1% of these chemicals reach the targeted pests, with 99.9% dispersing into the soil, water and air.

Due to the many problems in conventional cotton production (Myers, 1999), organic cotton production emerged. The first organic cotton project started in Turkey in 1980 and was organised by a European co-operative of fair food importers called the Good Food Foundation (GFF) with local organic growers of food crops. It was supported by a new Dutch company Bo Weevil formed for the purpose of dealing with organic cotton. Similar projects were set up in India during the 1990s. Soon, the developed world companies like Coop in Switzerland and Nike and Levi Strauss in the USA starting dealing with organic cotton products and Coop sold one million items of organic in 1997 starting with only organic fabrics in 1993. However, it was still a niche market with organic accounting for only 0.06% of global cotton production.

Though it was produced in more than 15 countries by the late 1990s, major producers were Uganda, Egypt in Africa, India in Asia and Peru in Latin America besides Turkey and USA with USA accounting for 32% of total and Africa, India and Latin America about 19%, 15% and 11% respectively in 1997 (Myers, 1999, Menon, 2003).

The largest producer of organic cotton today is Turkey, followed by the United States and India and Pakistan. Other producers of organic cotton include Uganda, Tanzania, and several West African nations, Peru, Paraguay, Israel and Egypt. (By contrast, China is the largest producer of conventionally grown cotton, followed by the United States, India/Pakistan and Turkey) (Speer, 2005).

Organic cotton, which comprises the bulk of the organic clothing industry, is making its way into everything from infants' wear to sportswear. Most surprising, perhaps, is increasing commitment to organic fiber from big players including Timberland, Nike and Marks & Spencer, which are showing a desire to be good corporate citizens by reducing the environmental impact of their respective apparel supply chains. This spring, even Wal-Mart's Sam's Club debuted an organic yoga-inspired line of women's wear under the Josephine Chaus label, produced by Greensource. Whole Foods Market, the world's largest retailer of natural and organic foods, brought in $3.9 billion in sales in 2004. In March, Whole Foods initiated its first venture into apparel and home products in its new Austin, TX-based store, featuring clothing from Under the Canopy as part of the new lineup. What's behind this revolution? Certainly one major factor is a segment of the market place identified as LOHAS (Lifestyles of Health and Sustainability), which refers to a group of U.S. adult consumers, some 63 million strong, who "value health, the environment, social justice, personal development and sustainable living," according to the LOHAS Web site.

Today, Nike is the largest consumer of organic cotton in the world. In 2003, 3 million pounds of the 120 million pounds of cotton it consumed were organic. Nike projects that in retail year 2004, approximately 30% of all Nike apparel cotton materials contained some percentage of organic cotton, and 47% of all cotton-containing Nike apparel garments (more than 48 million) were manufactured with materials that contained a minimum of 5% organically grown cotton. Nike's goal is for all of its cotton apparel to contain at least 5% organic cotton by 2010 (Retailer Coop Switzerland is the second-largest consumer of organic cotton, using 2 million pounds in 2003). There are three reasons that consumers traditionally have sought out organic apparel: 1) allergy sensitivities; 2) lifestyle choice; and 3) softness (Speer, 2005).

Certification of organic cotton production and processing adds credibility to the final products and promotes marketing at a premium price. Besides access to markets, it also provides benefits like better planning, better marketing and extension, more transparency, credibility and visibility, and access to support. There were more than 100 certification agencies for organic agriculture world wide during the late 1990s (table 5.1). Certification provides a comprehensive system for ensuring that certain standard of organic production and processing are met. The system includes: i) developing standards (i.e. standard setting) ii) verifying and evaluating performance against those standards (inspection) and iii) recognising producers who successfully met the standards (certification) (Rundgen and Hagenfors, 1999).

Certification of smallholder groups

The current international standards are mainly influenced by the practices and ideologies of organic agriculture in the industrialized world (Myers and Stolton, 1999). Certification agency carries out the annual inspections of the small holder group, which consists of inspection of a proportion of individual farms, and assessment of the Internal Control System (ICS). Certification becomes difficult and possibly unnecessary in situations where thousand of small holders are involved. Small holding group must be large enough such as Maikaal Project in India and in Uganda, in order to support a viable ICS. Cost of certification can be high in relation to the value of the product (table 5.2). This is true in case of textiles because of a number of processes involved from producers to consumers.

The payment of premium for organic cotton is required as farmers incur higher cost of production and certification, but lower yields to begin with. Further, since no market for organic cotton exist; the farmers would have to sell organic cotton in the conventional market at a lower price which does not cover extra cost. Further, conversion is highly time consuming, especially in cotton, it take nearly three to five years due to the pesticide residues in soil and lack of natural soil fertility. The small volumes of production and size of the market for processors and manufacturers also leads to higher financial risks. There are also added costs of coordination (Goldbach, 2003) (table 5.3).

Table 5.1: Organic certifiers and standards used in key organic cotton projects in some cotton producing countries

Country	Project	Certifier	Inspection & certification stds.
India	Maikaal bioRe Srida bioRe VOFA Ginni Project	IMO IMO Agreco SKAL	EU EU EU SKAL
Senegal	ENDA-Pronat Koussanar Vellingara Konghul	Ecocert Ecocert Ecocert Ecocert	EU EU EU EU
Uganda	Largo Union	KRAV SKAL	KRAV SKAL
Tanzania	Tansales Ltd.	IMO	EU
Turkey	Rupanzel , Cototn Country, Hess Four Bo Weevil (Yilderim project)	IMO SKAL	EU SKAL
USA	Arizona and New Mexico states	OCIA	OCIA

Source: Rundgren and Hagenfros in Myers and Stolton (eds.), 1999.

Table 5.2: Certification cost in organic cotton growing in some countries

Country	Certification cost as % of value of cotton fiber product
U.S.A	1.3
India	8.0
Egypt	0.1
Peru	0.5
Uganda	4.3

Source: Elzakkar in Myers and Stolton (eds.), 1999.

Table 5.3: Examples of premiums paid at farm level

Country/State	Cost price increase of organic production per unit of land	Yield decrease of organic production per unit of land	Premium paid
India	-16%	14%	25%
Egypt	2%	7%	15%
Peru	11%	20%	18%
California	11%	12%	50%

Source: UNCTAD and IFOAM (in press) as quoted in Myers and Stolton (eds.), 1999.

The costs for organic fibre were higher in most categories except ginning and spinning, and were significantly higher for dyeing and printing. For weaving, costs were slightly lower. Overall, a specially finished organic T-shirt was 24% more expensive ex-factory than its conventional equivalent (Elzakker, 1999). From the

spinning perspective, the costs of producing 100% organic yarn are typically higher, as it requires a dedicated supply chain, or one that is completely cleaned for organic spinning, to eliminate the risk of contamination from conventional cotton. The difference in price at retail level in Western Europe of organic over conventional is in excess of 60% – a striking contrast. The costs of cultivation of the raw material and the costs of its processing and manufacture are shown to be only a small proportion of the final retail price – about 22% for a conventional cotton T-shirt. Therefore, an even greater increase in these extra organic costs need not necessarily cause significant rises in the retail price. It is the distribution costs that create a large differential between the retail price of organic and conventional garments. Limited retail outlets, higher risks, smaller volumes, the education of sales assistants and consumers are all significant in adding to the margins expected by the distributors and retailers. Finally, at the retail level, the price of a garment is not necessarily related to the costs of production. It can be determined by other factors such as whether it is well-designed, fashionable and, finally what the market will bear. There is at present a market which is willing to pay prices for textiles which are not related to the costs of production.

There are several reasons why production, processing, manufacturing, distribution and retail of organic clothing are more expensive than conventional, especially in the start-up phase. Substantial investment may have to be made initially to set up and organize a project. In some cases, the initiative may come from buyers which organize the chain from farmer to consumer. Even the cost of visiting all the participants in the chain may be significant. Moreover, in the early years of a project, volumes may be small and processing may be more expensive without the advantage of economies of scale. Secondly, overheads related to the need for expert organic advice and assistance in the early stages are also important. In the absence of suitable skills and experience in government extension systems, especially in developing countries, farm advisers from the industrialized countries have been involved. They work alongside local agronomists and extensionists on research, training and setting up documentation systems which are necessary to build the system. In the early stages of a project, when high input is required and output is still low, the cost of this service is relatively high. As experience is gained and projects mature, these costs will be reduced. When organic techniques are internalized into publically funded structures, which exist to support agriculture generally, then sustainable cotton production will

not have to support these extra costs. Thirdly, certification, usually carried out by Northern organizations, sometimes with the involvement of local inspectors, is an expensive process. However, certification bodies have set up offices at national level in countries of the South which should reduce costs in the medium to long-term. Certification can be particularly expensive where a large number of smallholder farmers are involved. As in other cost areas, economies of scale are important here as well. The problem of the costs of surviving the organic conversion period can be barrier to farmers wishing to convert unless some financial support is provided. In a number of countries, solutions have been found to the conversion period problem by adopting a field-by-field conversion strategy. In conversion food crops or animal feed crops are grown for the first two years and then cotton in the third year. The cotton can then be marketed immediately as organic. At the processing, manufacturing and distribution level, there may also be extra costs such as investment in environmentally responsible dyeing plants. Some companies argue that there are extra costs at the design stage due to limitations on the range of types and colors of fabrics available. Lack of economies of scale is also important at the manufacturing level.

If organic is to become mainstream, however, retail prices for all products would have to be at or close to the retail price levels for conventional cotton goods. This, in turn implies that the recovery of high initial costs would have to be spread over a longer time-frame than appears to have been used to date. The experience of Coop Switzerland shows that marketing organic cotton clothing can be very successful. In 1997 they sold over one million items at the same prices as conventional items. Coop insists that good marketing is a necessary part of the sales strategy and that clothes must be colorful and fashionable (Elzakker, 1999).

Fair Trade in cotton

The fair trade movement started with third world shops and one world shops in handicrafts and was focused on commodities like coffee and fruits during the 1980s. The basic principles of fair trade movement include

1. No product sale below cost of production
2. long term partnership between buyers and producers
3. up to 60% of crop value could be given as an advance on order

4. the consumer will pay fair trade premium over and above market price
5. Guarantee to flow back the proceeds to the producers.

Fair trade labeling intends to mainstream fair trade products and organic premium is different from fair trade premium. The fair trade labeling standards include

1. standards for producers group (self cultivation)
2. Hired labour (factories) and
3. large farmers (part hired and part self labour).

There are also interim contract production standards for countries like India. The farmer group can be a formal but unregistered farmer body under a providing body like an NGO or a Corporate firm. The definition of small farmer for fair trade standards include

1. no permanent hired labour
2. 50% of produce should come from small farmers
3. no child labour and no full time hard labour and
4. no forced labour

On the other hand, on corporate firms, all the ILO labour standards are applicable besides adherence to national legislation on labour. Since many of the organic cotton players like Maikaal bioRe, Pratibha and VOFA have large farmers, the treatment of hired labour is an issue and premium will have to be used for the benefit of labour involved. The certificate fee for fair trade labeling is 2500 euro which is likely to be raised up to 4000 euro for each group besides 0.01% of value of goods sold. There is no guarantee of sale by FLO. It only allows to use FT label on products and only product is being labeled or certified not the entire chain.

The fair trade issues in cotton include child labour in picking, women labour and their work conditions and gender gap in wages. On the other hand, the Ethical Trade Initiative (ETI) sets standards for processing and manufacturing stages e.g. ginning, where labour cost is only 2-3% of total cost of final product, is known for very poor labour standards, work conditions and living conditions especially in Gujarat and M.P. But, there is also a practice of child labour in ginneries in M.P. It is also not possible to implement minimum and equal wage in India as due to the larger

dynamics of society, the women may lose work or may face higher exploitation due to higher payment. Therefore, there is a need to maintain a separate fair trade fund with farmer organization for labour community welfare. Though, there is a fair trade for raw cotton but not having graded price and lower price for last picking, makes it unfair. The fair trade price in cotton comes to 0.37 euro cent or Rs. 22/- per Kg. There have to be individual farm contracts with group or farmer organization under fair trade standards and a guaranteed price for the farmer.

Also, there is no pressure for fair trade in textiles. FLOCERT is the certification agency for FLO. The benefits of FLO certification include assured price, advanced for sale and fair trade premium. Two of the Agrocel groups in Surendranagar and Kutch are fair trade certified by SFTI (Swiss Fair Trade Initiative). There are eleven labels under fair trade but a common logo of Max Havellar and Transfair.

5.3. Organic Cotton in India

Erratic rainfall, poor or spurious quality seeds, deteriorated soil structure and increasing pest attack have led to crisis in cotton farming in India. Most of the farmers who committed suicides in Maharashtra in 1998 were Dalits. In Andhra Pradesh, as well, studies have shown that most of the farmers who committed suicides were small and marginal farmers, owning less than five acres of land. The debt burdens are increasing on farmers because of increasing input cost. Hundred of cotton farmers are caught in a vicious cycle of debt and poverty, and have committed suicide in Maharashtra, Punjab and Andra Pradesh, and continue to die every year (Menon, 2003).

The difference between organic and conventionally grown cotton is primarily in the methods used to grow them, not the end product, Organic cotton production involves issues of conversion to organic, crop rotation, crop varieties, seed treatment, soil fertility management, pest and disease management, and harvesting (Elzakker, 1999). Though parallel organic and non-organic production is not allowed, part farm conversion is permitted if it can be separator clearly from other parts of the farm. But, control becomes difficult in such situations, though the problem of part farm conversion is relevant only for large farmers as small farmers do not even ask for it.

Comparing the costs of organic and conventional cotton production

Organic cotton production is very 'site specific'. Therefore, it is better to compare the costs within the same country or region than comparisons between countries. As far as organic cotton is concerned, important savings are made in costs of seeds, fertilizers and pesticides. But, there is increase in the costs of bullock labor and farmyard manure. Also, cost of certification relates only to organic production. The overall cost for organic cotton was 16% lower than for conventional cotton (table 5.4) while yields are estimated to be 14% lower. But, processing, manufacturing costs of organic are either higher or same as of conventional cotton based products (Elzakkar, 1999).

Table 5.4: Indicative cost of conventional and organic cotton production in Maharashtra (1996) Costs (US$/Ha.)

Inputs	***Organic***	***Conventional***
Human Labor	150.00	117.50
Bullock Labor	77.50	60.00
Seeds	33.50	95.50
Manures (farm yard)	50.00	41.00
Fertilizers	30.00	70.00
Pesticides	40.00	117.50
Certification	45.00	-
Interest	42.50	50.00
Total	468.5*	551.5

*- 15% lower than conventional .
Source: Elzakkar in Myers and Stolton (eds.), 1999.

Organic Certification and Marketing

There is also certification of processing and manufacturing stages of a textile chain as per the organic standards of processes and there are organic textile labels like The Dutch EKO of SKAL, TDA of USDA, KRAV's GROLINK and The German AKN. There are also eco labels for textile like The EU eco label and the IFOAM label. The criteria for these labels range from production of fibre in farms to no chemicals and oils in manufacture, spinning, knitting and weaving processes, and in bleaching and washing, dyeing and printing besides finishing, energy and water use, and social conditions of production and manufacture. But, most of the labels have not been successful as there is lack of awareness among buyers and knowledge among

manufacturers about these labels besides high costs due to their low value in market, and the fact that a label alone can not make a product sell (Hagenfros, 1999).

Organic Cotton Projects in India

Around the late 1980s, farmers in some parts of India had deliberately switched to organic farming, and later, in 1994, VOFA was among the earliest initiatives of organic cotton farming in India, along with Maikaal bioRe and EFFORT by BOWEEVIL in Gujarat. The Dutch company (SKAL) was the first to explore this, and set up a joint venture for organic cotton, with GUJCOT (Gujarat State Cooperative Cotton Federation) during the 1990s in Patan district of Gujarat. The cotton was bought from farmers at the local or international market rate, whichever was higher, besides a premium of 20%. The project worked well but after three years, the cotton could not be exported due to the export quota restrictions by the government and the project collapsed (Menon, 2003).

The total production of certified organic cotton fibre in 1997 was 1175 tonnes. The total production of cotton fibre was 2,70,0000 tonnes (Hemachandra and Mayee, 2001) with major one being Maikaal bioRe with 800 growers and 900 tonnes of cotton production (Myers and Stolton, (1999). Hence, only 0.0435% of total cotton produce was certified in 1997. But, In terms of area under organic cotton, it was of the order of 20,000 hectares as registered area and a much larger acreage (60-70 000 hectares) as unregistered (Menon, 2003).

In 2005, there are eight organic cotton projects in India, with 1525 farmers across 137 villages in MP, and 2559 farmers in 106 villages in other states (Appendix 1, chapter 5). The farmers have average holdings of 10 acres or less each. In 2003-04, there was an area of 18,600 acres under organic cotton in India with an estimated yield of 30,060 qtls of ginned fibre (lint). The major varieties grown were hybrids like Bunny, S. Bunny, JKH-1, Tulsi, Paras, Ankur-9, Ankur-2534, Green gold, Akka, Swadeshi, Chamtkar, Daftari, waralakshmi and Devraj. This section profiles the various organic cotton projects in India. Appendix Table 5.1 gives a profile of various organic cotton projects in India.

Maikaal bioRe

In M.P., the Maikaal Project is based near Indore. The project covers an area of 2200 hectares and involves 800 farmers in 85 villages in a 50 kms. diameter (Myers and Stolton, 1999) producing 900 tones of fiber. The farmers own 5% shares in Maikaal BioRe, The crops cultivated include cotton, wheat, mung, groundnut, pigeon pea, cowpea, maize, sorghum, millet, chilly, pepper, soybeans, banana and sugarcane. Dialogue amongst the farmers continues throughout the season on following issues: (1) prices (2) grading system (3) transport and supply of inputs (4) farming techniques (5) cost-benefit analysis (6) experimentation etc. (Daneil, Elzakkar and Caldas, 1999).

In 1992, an alliance between local farmers, their local spinning mill, sales agents and an organic consultancy set about creating an organic cotton project at a time when farmers were experiencing severe pest problems despite repeated pesticide applications. The production of organic cotton started at the mill's small farm as a private initiative of Mrigendra Jalan, MD of the spinning mill, Maikaal Fibres Ltd, and Patrick Hohmann, MD of the Swiss cotton yarn trading company, Remei AG. A pilot project was initiated in 1992 with a few farmers on 15 acres. In the following year, 200 farmers joined the trials, applying a range of solutions that had been developed through a series of meetings between consultants and farmers. In 2001, more than one thousand farmers, cultivating more than 6,000 hectares had joined the scheme. Organic cotton is the main crop, accounting for around half of this area. It is grown in rotation with a wide range of other food crops. An extension centre serves between eight and fifteen villages each. Regular monitoring is undertaken by these eight extension centres and practical and theoretical training is offered to farmers. A range of biodynamic and organic production techniques has been developed including the use of trap and host crops to attract natural enemies, compost making and the use of biodynamic preparations. The latter are prepared locally and generate jobs. Farmers have a guaranteed market and receive a 25% premium.

The Swiss yarn and textile company Remei was instrumental in setting up the Maikaal project in India. Initially, the organic cotton, certified by the Swiss Institute for Market Ecology (IMO), was only sold as yarn, but since 1995, it has begun to market its own clothing collection 'bioRe'. In 1993, a spinning mill, Maikaal Fibres

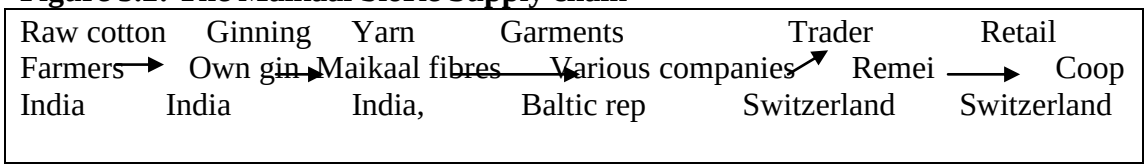
was established to assure farmers guaranteed sales. Certification by IMO is gradually being extended along the production and processing line. The cotton gin and spinning mill are subject to certification and successive processing phases are also being integrated into the system with its own SA8000 certified ginning mill and networking with Biore network for spinning and garment manufacture.

Remei markets the Maikaal cotton products in Europe. The first garments made with organic cotton from the project were available in Switzerland in 1995. In 1997, outlets were further expanded when the German mail order company, Otto-Versand, began to include clothes from the bioRe range. The method of production has been made transparent at the point of sale. The Coop-Schweiz, a consumer co-operative and the second largest retailer in Switzerland, has, for example, provided information on the source of the cotton for its consumers, so allowing the 'face' of the producer to be visible and enabling the consumer to make an informed choice. Remei calculates that production costs of textiles made from organic cotton are approximately 25% higher than comparable products from conventional cotton. This is due to the raw material being more expensive due to lower yields and high certification costs. Environmentally responsible dyes also cost more than conventional ones. However, costs are lowered through the supplier-customer chain, because each partner in the chain waves short-term maximization of profits in favour of long-term co-operation. Therefore, bioRe clothing is only slightly more expensive than comparable products produced conventionally and are thus affordable by a broad section of consumers (Daniel, et al, 1999).

The organic cotton project has since expanded to over 1500 farmers and 18000 acress (10,000 under cotton) in 80 villages of Khargaon district (table 5.5). Remei developed partnerships with manufacturers to produce a whole range of quality, fashionable, ecofriendly garments made from Maikaal bioRe's organic cotton. The entire supply chain was integrated in 1995 when Coop, the retailer joined. Coop is Switzerland's second largest supermarket chain and Europe's market leader in ecological-social products. It has been buying for the last seven years and is committed to the project. Maikaal bioRe Ltd is located at Bheelgaon near the river Narmada in M.P.. It procures and sells biodynamic (certified organic) cotton and cotton yarn. It supports local farmers in growing cotton following the biodynamic methods and buys the fibre

directly from the farmers, has it ginned and sells to the spinning mill, Maikaal Fibres Limited. It then usually buys the yarn back to sell it to the cotton yarn trading company, Remei AG, or its approved customers. Remei manages the network, coordinating production and facilitating communication. bioRe textiles, made of Maikaal bioRe biodynamic cotton are sold by Coop, which plans to convert its entire cotton line to organic by 2010. Maikaal bioRe is now converted into a farmer company with 20% premium on shares of which 15% will be paid in cash and the rest in shares, with 20% being in cash and 5% bonus in shares for the first year (2000) (Menon, 2003).

Figure 5.2: The Maikaal bioRe Supply chain



Source: Menon, 2003.

Table 5.5: Growth of Maikaal bioRe organic cotton project

Year	Farmers#	Area (acres)	Raw Cotton (t)	Ginned Cotton (t)	Yarn (t)
93-94	223	467	206	68	42
94-95	568	1340	516	185	135
95-96	649	3000	1366	468	336
96-97	688	4585	2096	713	500
97-98	699	5204	1870	627	436
98-99	888	6195	2043	705	507
99-00	1061	7425	2584	835	585
2000-01	1123	8067	2362	760	532
2001-02	1000	7956	2080	683	478
2002-03	1021	7626*	2646*	873*	611*
2003-04	1174	8805	3055	1008	706
2004-05	1291	9682	3359	1108	776
2005-06	1420	10552	3695	1219	854
2006-07	1562	11715	4065	1341	939
2007-08	1718	12885	4471	1475	1033

Estimates, *Planned (hereafter), Source: Menon, 2003.

The impact after about 10 years is that yields are 20% higher than on conventional farms, and yields of other rotational crops, such as wheat, soy and chili, are equal to or up to 20% higher than those on conventional land with sugarcane yields being 30% higher. Sugar mills pay a premium for the organic sugar cane as it is higher in sugar content. Other products, particularly wheat, attract a local market premium because of

their superior taste. Further, soil quality has improved, irrigation requirements have been reduced because of the increased moisture retaining capacity of the soil, pest incidence has been reduced whereas conventional farmers have been facing an increase in pest incidence, labour requirements have been substantially reduced and production costs for organic cotton are 30-40% lower than in conventional production, and given the reduced costs, equivalent or higher yields and market premiums, farmers' margins are now significantly higher than before (Stoll, 2002).

Amit Green Acres

In Surendranagar, Amit Industries has been working with a group of organic farmers producing cotton organized by its subsidiary Amit Green Acres Private Limited. The company has a 100% export oriented unit at Kolhapur, which produces cotton goods from the organically grown cotton and exports it to Germany and other markets. The project began in 1999 when a ginning unit called Rajpal cotton was started in the area - the hometown of Bharat Shah, the owner of Amit Industries. The idea was to interact with farmers directly and buy cotton from them, thus eliminating middlemen. In the course of interaction with farmers, the ideal of growing and marketing organic cotton was discussed. However, growing produce organically has since then not been restricted to cotton and now farmers are also selling sesame for a higher price, besides gram, millets, cumin, isabagol, ajwain, and basil. In 1999, the project began with one farmer, who owned ten acres. In 2003, there were 147 farmers in all, with an area of 900 acres certified as organic, while about 2500 acres were in various stages of conversion. Since 2002, all the agricultural activities have been shifted to a new company called Amit Green Acres Private Limited. Now, the organic growers number 500 and cotton acreage 1500 acres though total acreage under organic cultivation is 3200 acres. About 40% of the farmers are under in-conversion. It has its own spinning mill but no garment production.

The first step is for a farmer to apply to the company in writing for growing organic cotton. The applications are then sorted out and the farmers who can join the group are selected. The extension workers visit the farmers in question and record basic information about the farm, location, risk of contamination, size of the farm etc. A review committee consisting of farmers, company officials, and extension workers

assesses the potential of the farmer to turn organic. For each farmer, there is a conversion plan prepared for three years. This is a set of cultivation procedures designed to achieve certifiable targets. Farmers also have to record their daily activities on the farm in a special diary, and make a note of inputs, costs, labour cattle management etc. This helps to assess whether the conversion plan is being followed or not. The diary forms an important part of the final certification process. In organic, certifying the system rather than the product is followed. After the initial certification, there is annual certification. The certificates are valid only for a year. Certification by SKAL is paid for by the company for the farmers. The company spends Rs. 4 -5 lakh per year for certification. The issue of certification is a contentious one, as it is expensive and farmers cannot afford it though it had adopted group certification system.

The company signed contracts with farmers, agreeing to provide technical help to grow cotton without chemicals and insecticides. It also agreed to undertake extension services and transfer of technology. It does not provide any inputs. It only gives advice. In the first year, it provided the manure but the next year, farmer made their own compost and it provided them with EM (effective microorganisms), which speeds up decomposition of farm residues within 30-40 days instead of 6-7 months. Farmers are now recycling everything and returning it to the land in a time-honored tradition. Some are also making compost and providing it to others. The price is fixed based on the prevailing market price as well as quality. All the organic cotton is sent for spinning and the yarn is sent for conversion to fabric or ready made which are then sold in Japan, Malaysia, France, and Nepal. However, the venture is only a small part of the company's turnover i.e. 0.3%.

Most of the farmers grow hybrids. The average landholding is about 7 acres in this region and the company operates mainly in Chuda taluka of the district. The main crops here are cotton, sesame (these are often grown together), cumin, mung (green gram), bajra, millets, jowar and vegetables. Cotton is also mono-cropped. There are extension workers who work with the farmers and every month a meeting is held to explain the procedures of organic cultivation and discuss difficulties. In Chuda, 50 km. from Surendranagar, farmers in 15 of the 38 villages practice organic farming and sell cotton and sesame to the company

The average cost of production for organic cotton works out to about Rs. 3400/acre, which includes the cost of seeds, manure, bio-control, cultivation labour and irrigation. The farmer gets a return of Rs. 5800-6000/acre after selling cotton, so there is a clear profit of Rs. 2-2500/acre. In 2001, the average yield of organic cotton was about 500 kg/acre. While this may not be high, it depends on whether farmers have water at least for protective irrigation or not. In Halvad taluka of the district, where there is irrigation, farmers can get up to 16 Q/acre. In the rain fed areas, the yield is much less. In Chuda taluka, where the company mainly works, farmers use biodynamic farming method, which believes in harnessing the forces of nature for agriculture (Menon, 2003).

Vidharba Organic Farmers Association (VOFA)

In 1994, with the help of Prakruti, the organic farmers in the region formed themselves into an association, VOFA, and decided to embark on an organic cotton project. Farmers from five districts (Nagpur, Wardha, Yavatmal, Amavati and Akola) took part in the first project meeting, resulting in 135 farmers committing 1200 ha to the project – an average of almost 9 ha per farmer. Cultivation began in May 1995, and the first 105 tonnes of certified cotton fibre was produce in 1995-96. Sesame and sorghum and other crops are inter-cropped. The organic cotton produced by the farmers in the Association is certified by Agreco, an approved German agency. The team from Agreco visited the organic farms for the first time during November, 1995. Farmers were interviewed, farms were inspected and various tests were conducted on the soil and the plants. On the basis of these results, and the period farms were under organic cultivation, the certification was done according to three different evaluation categories – ‘A’, ‘U’ and ‘O’. The ‘A’ category included farms with fully organic cotton from fields which had been under organic cultivation for more than two years before sowing. Farms which produced cotton organically for at least one year were in category ‘U’ with permission to label cotton as a product in conversion to organic agriculture. Farms which were at the beginning of the conversion to organic agriculture were in the category ‘O’ and did not have permission for organic labeling.

On request of VOFA, the Cotton Federation, which runs the monopoly Procurement Scheme in the State of Maharashtra, provides separate ginning and processing facilities for the organic farmers to avoid their products being mixed with the conventional cotton. According to VOFA, organic farmers receive a premium of between 25-50% on their crops (Daniel et al, 1999). Now, it has 95 members, 100 acres under organic and 500 under cotton alone with average holding size of 5.3 acres. Most (98%) of the members are certified now. It outsources ginning and has agreement with Rajklakshmi Mills for spinning and garment production.

Eco Farms

This private company based in Yavatmal, Maharashtra was formed after the spilt in VOFA. Cotton is the main product the company sells, but since 2001, it also sells grains and pulses, oilseeds, cashew, spices and soya, and engages in value addition for cotton, in the form of ginning, yarn, and garments, which is outsourced through mills. The major buyer for finished goods is Germany. It makes a contract with farmers with guarantee of purchase and fixed price. It started with about 150 in 1995 and today has 7000 farmers with 50,000 acre under organic and 20,000 under cotton. It gives 10% on market price of conventional cotton as price for organic cotton. Its ICS staff monitor all the fields of farmers and records are maintained in a farmer diary. It is IMO certified. It spends Rs. 10 lakh every year for this purpose which is paid by the farmers. Production cost for intensive farming average between Rs.6000-7000/acre, but for organic they are much less (Menon, 2003).

Organic Farms

In Maharashtra, this company is working with 500 growers with total acreage of 6500 and 2300 under cotton and has no involvement in ginning, spinning or garment production.

Mahima

Mahima works with 600 growers in MP with organic acreage of 10000 acres and cotton acreage being 4000 acres. Its average grower has 6.7 acres of land. It has its own gin and is starting own spinning also in 2006. It has no plans for handling garment production

5.4. Major Findings from case studies

Table 5.6 gives an overview of the scale and magnitude of the three organic cotton projects studied. For details see, cases studies in appendices. Most of the cotton projects are driven by export markets right now and have not yet fully stabilized as seen from certification figures and ingress of Bt cotton in some pockets of some of the projects.

Small Farmer Exclusion

As the average size of the holding of the organic cotton growers in table 5.6 indicates the organic cotton project participants in general and those in contract farming projects in particular are mostly large and medium farmers as the project sponsoring agencies or companies prefer such growers for reasons of scale economies and transaction costs. Further, the certification is also generally with the agencies which ties farmers to them and compromises on the independence of the grower to part ways with the agency. This is largely because individual growers, esp. small ones, find it cumbersome and costly to get certification on their own. The farmer organization and ownership of organic cotton projects is an issue as most of the time, control is not with the farmer groups. This is a governance issue and needs policy and corporate attention.

Table 5.6: A comparative picture of the organic cotton projects in 2005

Company/project> Parameter	**Vasudha (of Pratibha)**	**Agrocel**	**Organic Chetna (of ETC and Solidaridad)**
Area (states)	M.P. (108 villages)	Gujarat	A.P. and Maharashtra
No. of farmers	3000	2000	410
Acres under the cotton project	21,000 acres	2000 acres	2000
Certified acreage (acres)	11,000	800	149
Certified farmers (no.)	700	193	11 (200 in in-conversion stage)
Average size of holding	15.3 acres	7.8	4.9
Pricing formula	Conventional produce price plus premium	Conventional produce price plus premium including fair trade premium	Price higher than market price of conventional cotton (by 10-15%)
Nature of Organisation of growers	Individual contract growers	Agrocel organic and fair prodcuers' groups	Village level farmer groups who are to be federated finally into a farmer co-operative company
Certification rights with	Company/project	company	Group certification
Processing facilities	Own, as part of cotton milling and manufacture complex	Processing of cotton outsourced and manufacture by JV company	Outsourced to ginning and spinning mills and even garment manufacturing units
Major markets	captive for further processing and then export to intl. brands and retail chains	Export largely and some domestic selling of cotton	Domestic sale of cotton and export of garments

Further. the organic cotton value chain in India is very complex and wide and thus involves many issues in supply chain management which are discussed below:

Quality issues in Organic cotton supply chains

The processors need longer staple cotton with lint length more than 30 mm and need bigger volumes (table 5.7). At the gin level, they need stronger packing material, no ink labeling but stickers and clean trucks. For processors, dying in organic is a problem.

The farmer concerns about organic farming include

1. lack of awareness of benefits of organic farming
2. lack of excess to technologies and inputs
3. lack of incentives
4. lack of skills
5. lack of market excess

Table 5.7: Cotton Staple Lengths

Category	**Length (mm)**
Superior long staple	> 27 mm
Long staple	24.5-26mm
Superior medium staple	22-24mm
Medium staple	20-21mm
Short staple	<19mm

Source: Menon, 2003.

The traders and processors face problems of

1. inconsistent supplies
2. insufficient volumes
3. lack of quality storage
4. lack of market information
5. under developed domestic market

6. high quality conditions for export

The ginning conditions and quality improvement are also important issues in the marketing of cotton, especially in domestic market.

Therefore, some agencies like Maikaal BioRe have gone in for their own organic certified gin and acquiring S.A. 8000 standards. It is also difficult to ensure fair trade standards in ginning as the nature of work is seasonal. Therefore, there is need to create alternative jobs within or outside the gin like cleaning white washing and composed making. Also making farmer comply with fair trade standards is an issue as they cannot be monitored and there is an adversary relationship between the farmer and the labour. Some of the big chains like Timberland are reaching the lower hands of the chain (gins and farms) with their own social standards.

The Bt cotton spread in some of the organic cotton project areas has led to mix up problem at the farm level. Whereas some farmers are frank about it and go out of organic project on their own, others do not reveal the Bt acreage. There are Bt test kits available to check Bt. cotton presence in the field which is cheaper than the lab test which costs Rs. 100/- per test. Some of the organic cotton players also make their farmers keep empty seed pack for evidence of seed used as a control mechanism at the farmer level. Other than the permitted varieties of Bt cotton there are dozens of illegal varieties. Also, if farmers do not take seed from the organic cotton production organizer, then there are doubts about Bt cotton seed use. Maikaal decertified 100 farmers last year as they used Bt cotton seed. Similarly Pratibha blacklisted a farmer who planted Bt cotton without its permission.

At the farmer level cleaner, cotton could be ensured by some farmer groups in Maharashtra by paying Rs. 0.5 per Kg. more for cleaner picking but the farmers had problems of quality loss due to mandi and gin conditions and delayed payments. At the farmer level quality could be improved by not picking cotton early in the morning to avoid moisture and separating infected balls from good once. Since cotton picking is dominated by women, there is a need to give incentives for quality improvement. Finally, it is the ginning which determines the quality of cotton in terms of length of lint which cannot be undone. The contaminants (foreign matter e.g. gutka packs and

human hair) are different from trash (leaves and twigs), and cannot be removed by machine. Therefore, quality improvement in terms of contamination control requires picking cotton with covered heads, not eating in cotton fields and in cotton store area or the market.

Gender and labour issues in cotton chains

The gender issue in organic cotton supply chains is important as women are involved in farming, manufacturing, designing, and retailing. The gender issues in organic cotton production include role of women in decision to go organic, workload on women due to organic input preparation and use, lower wages for women, and social cost of certification. Thus, the organisation of the chain (extension, documentation) with more gender sensitivity is required.

The ginning part of the chain suffers from child labour, poor working conditions, dirty surroundings and unfair wages and the chain drivers have very little control on these.

Marketing issues

The marketing needs to take into account: local markets, developing the niche markets, generic promotion of the organic textiles market, government applying environmental criteria to its own buying policies for institutions such as police forces, schools, army, air force, navy, railways and so on, blending organic cotton with conventional cotton in textile production, working with environmentally sensitive companies; and linking with local industries geared to making organic products (such as the hand-loom industry in India which contribute 20% of the Indian textile production and where handmade and custom-made designs of fabrics can easily be handled). There is already a good beginning made with the two stakeholders' workshops being organized this year by Solidariadad where farmers, NGOs, processors and buyers participated.

Main Challenges in Organic fair trade cotton supply chain

The chain management challenges include reducing number of varieties of cotton for the E.U. market and better sampling and yield projection which now varies up to 70%. The common storage and organic certification of gins are other issues.

Major issues in organic cotton production organisation include: small holdings, input availability, group certification and ICS, besides quality and regular supply. On the other hand, the fair trade issues include child labour, women' wages (gender gap), and work conditions.

There is lack of motivation amongst farmers to improve quality due to no immediate benefits, lack of training and orientation for documentation, nature of the commodities which makes quality care difficult (bulk), lack of trust amongst chain partners and inclusion of social standards especially the labour interest. One solution to the documentation issue could be involving younger and literate members of the farming family into organic project. The more recent issue is that of the introduction of Bt cotton in the area due to which many organic groups are leaving the project. Also, the sale of in-conversion produce is an issue as there are no markets for this produce.

Appendix Table 5.1:An overview of organic cotton projects in India

Agency	Chetna Organic	VOFA	MAIKAAL	AGROCEL	Pratibha	Ecofarms	Mahima	GreenAcre
BASIC DATA	**2004**		**1992**	**1988**	**1996**			**1999**
State	AP, MH	MH	MP, MH	GUJ, HR, MH, OR	MP	MH, OR	MP	GUJ
No. of Farmers	600	95	1516	274	2100	8600		469
Acres Organic	5000	3000	18000	3448	15000	22000		3400
Acres Cotton	2500	1100	10519	1402	7000	6000		1500
% irrigated	0	5	0	0	0	0	0	0
Avg. cotton holding (acres)	4.2	11.6	6.9	5.1	7.0	0.7		3.0
Total production raw cotton (qtls)	5,000	2,600	40,000	9113	7000	30,000	0	7,500
% in-conversion	90	2	20% IC & 14% NC	15	Not known	17		40
Organic non-cotton prouducts	Gram (red, black green, horse), maize, sorghum, chllies	Gram (red, black, green, horse) soy	Soya, maize, sorghum, chilli, pigeon Pea	Seasame, Basmati Rice, Wheat, Chickpea, Cluster bean, Mustard, Lentils, fruits and vegetables	Soyabean, aniseed, chili, sorghum, tulsi	Pulses, cereals, millets, oil seeds, spices, cashew		Gram (green, black), seasame, millet, cumin, isabgol, ajwan, basil
Involvement	Outsourced	Outs3ourced	Modern own	Outsource	Own gin	Outsourced	Own gin	Own gin and

in ginning			ginnery (SA 8000 certification by end 2006)	under Agrocel control				spinning
Involvement in spinning	Through Rajaksmi and SSM	Through Rajaksmi	BioRe network	Through Arunoday Mills	Own	Outsourced	Own	
Involvement in garment production	Through Rajaksmi	Through Rajaksmi	BioRe network	Through Gossypium	Own	Outsourced	No	
SOCIAL ORGANISATION								
Basic group form	SHG	Study Circle	Farmers' representatives, Membership to association	Farmers' groups and individuals	contract farming system.			
Farmer ownership of project	Solidaridad, ETC and NGO's hold intermediate powers through C'tee	Fully farmer Owned	5% shares of Maikaal BioRe owned by farmers,	no	No	Fully farmer owned	No	no
Farmer influence in decision making	Farmer reps. In steering C'tee	Annual member meeting	At the board and with the farmer representatives and the general assembly	As per guideline of Fair trade standard		Farmers reps. in committee	No	Annual meeting with farmers
Buy back guarantee	No, only intention for >	No	5 years	Yes, for planned	In conversion and organic	Total buy back	yes	yes

	24 mm			acreage	100% guarantee.	guarantee		
Common storage facilitates	For each village	No	None at all	No	No	For each village	No	No
Credit arrangement for farmers	ETC soliciting commercial offers-MAX 8%	No	Inputs on credit	Yes, through bank, crop loan	No	no	No	No
TRAINING								
Methodologies used for technical training	Farmer field school	Occasional visit by expert	Theoretical combined with practical	informal	Theoretical and practical demonstration	Farmer field training	informal	informal
Number of farmers per field staff	20	50	40 to 50	30	60	n.a.	n.a.	40
Certifier	SKAL	SKAL	Bio-inspects	SKAL	SKAL	ECOCERT	SKAL	SKAL
Internal inspection method	Consultant + farmers being trained for peer review	2 internal monitors and peer review	Farmers visited on a 21day cycle, with 2nd level inspection	Advisor's guidance and monitoring of field work	extension officers	Internal monitors and peer review	n.a.	Extension workers, project coordinator
Fair trade certification	Applied	applied	BioRe criteria	Yes	No	applied	No	No
TECHNOLOGY								
Average cotton yield	2	3	4-5	6.5	6 - 7	5-7	n.a.	5

(qtls/acre)								
Source of manure used	Own and local	Own and local	Own and local	Own and local oorganic manure and green manuring crops	Own and local	Own and local	Own and local	own
Other fertilizers used	Poultry, rock phosphate, micronutrients	-	De oiled cake, pressmud, rock phosphate	Rock phosphate, neem and castor cake and compost	Rock Phosphate	vermicompost	-	EM
EM used	No	No	No	No	No	no	No	Yes
Intercrops used	Pulses	Pulses	Range of pulses	Sesame, pulses	Maize	legumes	-	-
Pest control measure used	Invite natural predators, NPV, Trichocards	-	Host crops, neem products, Bacilus Thuringiensis, etc	Pheromone & light traps, local pest control recipes, bioproducts/ biopesticides eg., Trichoderma verticillum, NPV	Mechanical controls like yellow grease board, pheromone trap, light trap etc, mulching, biological control, (attracting birds) neem products etc.	Neem, NPV, cow urine	-	Biological controls

Source: Organic Chetna project, Hyderabad

Appendix 5.2 – Case Study 1

'Vasudha' of Pratibha - 'Raw Cotton to Garment' Organic Chain

Introduction

Pratibha Syntex is a major Indian textile firm with 1.10 million metres per month knit fabric processing capacity at Pithampur (M.P.) and 30 million metres synthetic woven fabric processing capacity per month at Surat (Gujarat). It has both wet and dry dyeing facilities and claims to be the only fibre to garment company in India. It produces 40 million pieces of garments per year. The company has the status of a two star export house for textile products.

The Vasudha (meaning Mother Earth) project of Pratibha Syntex for organic cotton operational since 1998-99 intends a clean and eco-friendly cotton production and has a separate supply chain with a leased in ginning mill and separate storage at farm level to avoid contamination. The company has field office at Karahi village. The village falls under the Maheshwar block of Khargone district which is the West Nimar region in Nimar valley. This region (Nimar) accounts for 7% each of population and area of M.P. and received rainfall of 800-1000 mm annually and is moist semi-arid. More than 50% of its population is tribal compared with state average of 23%. It accounts for 6% of gross cropped area of the state, 19% of which is irrigated making for 5% of the state's gross irrigated area, with cropping intensity of 111 as against 126 of the state as a whole. Cotton accounts for only 2.3% of the state's cropped area with major crops being paddy, soyabean, wheat, and gram. But, the yields of all these crops, except soyabean and gram, are much below All India levels, with cotton yields being only 62% of that at All India level (Shankar, 2005).

Organic Cotton Production Organisation

In KARHI of KHARGONE district of M.P. (80 kms. from Indore), VASUDHA PROJECT works with 3000 growers in 108 villages within a radius of 25 kms from Karhi. The organic cotton production coordination including inputs is undertaken by a new company – Green Technologies Pvt. Ltd. which is a subsidiary of Pratibha. The farmers in these villages range from a minimum of 5 to a maximum of 90 with land

holdings ranging from three to 60 acres. The area is mostly rainfed with only 20% being irrigated by tubewells, open wells and Narmada pipelines. The company has a total 26 staff for the project with seven field officers, 14 supervisors, two consultants, one accountant and two support staff. A field officer takes care of 3000 acres of organic area. It plans its acreage for conversion and certification every year (Appendix 4). There are 21000 acres of organic area in 108 villages. In about a dozen villages, 86% of the project farmers are part of the organic project and mostly certified (table 1). The company is also providing drip irrigation facility which costs about Rs. 7000 per acre. The equipment is supplied by Laxmi Pipes and about 200 farmers have drip irrigation systems. The farmer has to make an application to the company to join the organic project as a grower (Appendix 1). It has written contract agreement with the growers (Appendix 2). The contract agreement is very detailed and specific on commitments and penalties unlike many other organic farming contract agreements. It lays very clearly all the production requirements expected from the farmer, penalties for default on any of the practices and even covers non-cotton crop sales at reasonable prices. The seeds and other inputs are given on credit by the company against premium on organic cotton (Appendix 3). The company suggests timing of agricultural operations like sowing, inputs supply and harvesting to all farmers. The violation of organic practices by the growers leads to the extension of the conversion period. The lower yield of organic cotton is compensated by lower costs (Rs. 5 per kg) and higher price (15% premium on market price). The premium is paid an year later as the seeds and other inputs for the next season are supplied against this premium. But, no premium is paid for the inconversion produce. The farmers are also given regular training and technical guidance for organic produce quality. The project growers are certified by SKAL International, Netherlands, and the per acre cost of group certification is Rs. 80-100.The company has its own ICS and its production standards meet the norms of NOP of USA, IFOAM, European Guidelines, Soil Association, UK, Oeko Tex 100, WRAP, SA8000 and IMO Switzerland. The field office maintains a farm diary along with farm map with details of inputs used, production practices followed and output harvested (Appendix 5).

The major varieties grown are BUNNY 145, ANKUR 651, MARUTI, PARAS and DCH. The seed is not treated with any chemical. The farmers were also advised to wash treated seed with salt water initially. Now, the seed companies provide untreated

seeds. There are two seasons- summer sowing in May and rainy season sowing. The maximum yield in organic cotton has been 14 qtls per acre. The droughts in 1999, 2000 and 2001 have helped the spread of organic cotton as it was a compulsion for the farmer besides an attraction of 15% premium on conversion. This year, BT cotton spread has led to serious setbacks for the in-conversion part of the organic project.

Table 1: Village -wise Farmer Coverage by Vasudha

Sr. No.	Village	Total farmers	Organic Contract Farmers	Percentage of organic contract growers in total
1	Karodiya	83	68	81.9
2	Chingun	93	77	82.7
3	Bhilawadi	45	34	75.5
4	Bhudari	97	83	85.5
5	Vani	98	80	82.4
6	Badlai	75	68	90.6
7	Bradiya	98	89	90.8
8	Mandari	55	49	89
9	Jamniya	68	45	68.1
10	Malyakheri	64	50	78
11	Karai	84	58	69
	Total	**812**	**701**	**86.3**

Source: Pratibha Syntex Pvt. Limited

Farmer Participation – Who are the organic cotton growers?

A primary survey of 44 contract organic cotton growers in 9 of the 11 villages where company has almost complete farmer coverage was conducted with the help of a structured schedule to understand the farmer perceptions of the working of the organic project of Pratibha. Out of total 44 farmers interviewed 5% were marginal (less than one hectare of land), 22% small (1-2 hectares of land), 22% medium (2-4 hectares) and 50% were large farmers (> 4 hectares). Average land holding was found to be is 15.3 acres with 50% having as high as 25 acres (10 hectares) (table 2) which is much larger compared to the average size of operational holding in the state (2.28 hectares or 5.6 acres). Further, 40% and 24% of the holdings in the state are marginal and small respectively with only 20% being semi medium (2-4 hac), 13% medium (4-10

hac) and only 2.6% large (GoP, 2004). Further, the average size of operational holdings in Nimar valley is 2.83 hectares (7 acres) and marginal and small holdings accounted for 52% of total. The region's irrigated area percentage is lower and tribal population percentage higher than that of the state and agricultural productivity lower than that of the state average, but has higher number of energized pumpsets per 1000 hectares of area and even higher consumption of electricity per capita and of fertilizers per hectare. Its credit deposit ratio (50) is also higher than that of the state as a whole (43) (Shankar, 2005). This shows that the company largely works with large and medium farmers as 50% its growers were really large growers with more than 10 hectares of land each. The correlation coefficient between own farm size and organic acreage was 0.84 again showing strong positive relation between size of holding and organic acreage (table 2.1).

Of the total land of these growers, 78.84 % was irrigated. Another study of organic cotton growers under another project (Maikaal bioRe) in the region also found that the organic growers were of higher social status (education, caste, housing and wealth) and better equipped with means of production like land, farm equipments, off-farm income and micro irrigation systems. They also hired more labour and had higher ownership of livestock. They used as much labour in cotton as conventional growers but use of nitrogen and phosphorus was only half that applied by conventional growers. But, they used more irrigation per kg. of seed cotton (6%) compared with that in conventional cotton fields (Eyhorn et al, 2005).

Of the total land cultivated by these growers (671 acres), 84% was under organic production contracts. Almost all of the marginal, small, and medium farmers have put their entire holdings under organic contracts but large farmers put about 82% of their land under organic contracts. Thus, 86% of the total acreage of these growers was under organic cultivation. Surprisingly, 99% (665 acres) of the land was owned by the farmers. Only a couple of large farmers had leased in altogether only 6 acres of land (Table 2). Most of the farmers (88%) were using wells (ordinary dug wells) for irrigation and almost 80% of them were organic certified (table 3).

Table 2 : A Profile of Pratibha's Organic contract growers (all land in acres)

Category	No of farmers	Total land	Average land holding	Irrigated	Unirrigated
Marginal	2(4.5)	4(.60)	2	4(.76)	0(0)
Small	10(22.7)	39(5.81)	3.9	28(5.29)	11(7.75)
Medium	10(22.7)	81(12.07)	8.1	76(14.37)	5(3.52)
Large	22(50)	547(81.52)	24.9	421(79.58)	126(88.73)
All	44(100)	671(100)	15.3	529(79)	142(21)

Note: Figures in parentheses are % in total.

Table 2.1: Distribution of growers by land holding size class and average acreage under organic

Size of holding (acres)	Average acreage under organic farming (acres)
0 - 5	3.34
6 - 10	8.81
11 - 15	13.14
16 - 20	13.34
21-30	24.00
> 30	33.00

Out of the total 44 farmers, 20% were in the 2nd year, 25% were in the 3rd year and 23% in the 4th year of their contract with the company. But, as many as 20.45% farmers were into contracts with the firm since last six years continuously and 9% since last five year (table 3). And, more of these were medium or large farmers only. It clearly indicates that the company initiated the contract organic farming with large farmers only. More recently, it is also adopting small and marginal farmers in the area to reap economies of scale of its project in the region.

The cropping pattern is dominated by cotton and soyabean in kharif and wheat in Rabi with other major kharif crops being chilies, jowar and maize (table 4). Crops in the Rabi season depend upon the availability of irrigation. If it rains less, farmers prefer to continue with cotton crop in winter season instead of uprooting it for cultivating wheat due to less water requirement of cotton, organic price premium that is paid only for cotton, and lack of assured market outlet for other rotation cops like wheat. Farmers in the region were aware of crop rotation. Larger farmers grow cotton after chilli; it gives them better yield of cotton. Moreover before shifting to organic farming, all farmers

made trials of organic farming, then they checked whether pest attack has reduced or not, only after that they shifted to organic farming.

Though the company is having long presence in the field but generally it is procuring only cotton. However, since last year, it has started procuring soyabean and wheat. All the farmers were provided with inputs like seeds, biofertilizers, biopesticides, technical knowledge, inputs on credit and certification support. However, only 50% of large farmers alone had availed of drip irrigation facility.

Of the total, 72% farmer shifted to organic farming due to land improvement, 80% due to lower input cost, 39% because of input supply by the company, 36% due to assured market and 48% because of good technical help. These are multiple response by farmers as generally there are multiple reasons for such shift.

Table 3: Distribution of growers by No. of years in contract with the company

Category	No of Farmers	1st	2nd	3rd	4th	5th	6th
Marginal	2	0	2	0	0	0	0
Small	10	0	4	3	1	1	1
Medium	10	0	3	1	5	1	0
Large	22	1	0	7	4	2	8
All	44	1 (2.2)	9(20.5)	11(25)	10(23)	4(9)	9(20.5)

Note: figures in parentheses are percentage to total number of growers

Table 4 : Cropping Pattern of Organic Farmers										
	Area under different crops (acres)									
Category	Cotton	Soya	Gnut	Chilli	Mong	Jowar	Tuar	Maize	Wheat	Gram
Marginal	2.5	0	0.75	0	0	0	0	1	2.5	0
Small	29.5	1.5	0.5	0.5	0	1	1.5	3	7.5	0.75
Medium	61	8	1.5	0.75	0.25	3	1.5	4.5	14.5	1
Large	326	97	6	15	1	15.5	5.5	21.5	119	18.5
Total (564 acres)	419 (74.2)	106.5 (25.4)	8.75 (1.5)	16.3 (2.8)	1.25 (0.2)	19.5 (3.4)	8.5 (1.5)	30 (5.3)	143.5 (25.44)	20.25 (3.5)

Figures in parentheses are the percentage share in total acreage.

Table 5: Distribution of growers for reasons for adopting organic farming

Category	No. of farmers	Land Improve.	Low Input Cost	Input support	Mktg.	Tech Help
Marginal	2	1	1	1	1	2
Small	10	5	7	5	5	5
Medium	10	9	8	1	2	4
Large	22	17	19	10	8	10
All	44 (100)	32 (72)	35 (79.5)	17 (39)	16 (36)	21 (48)

Note: Figures in parentheses show percentages

The survey revealed that 84.1% of the farmers got inputs on credit, 93% of farmers got higher price benefit. Earlier, they had to purchase costly insecticides for conventional cotton production, that too by borrowing money from moneylenders who charged huge interest from these farmers. But, now these inputs are purchased from the company itself free of any interest. All the contract farmers were monitored by the company. The annual certification cost was also born by it which is Rs. 80-100 per acre. Terms and conditions of the contract were same for all the farmers. This shows the company's transparent and non-discriminating attitude. Contract farmers show deep regard towards company's policy.

Medium and large farmers have also increased the area under the cotton and chilly crops by 60% and 200% respectively over the last few years. The total area under cash crop (Cotton and Chilli together) increased from 50 acres to 88 acres i.e. 0.86 acres per farmer. Out of total 44 farmers, 47% farmers also reported that their risk of crop production has decreased as their input cost has reduced considerably. They said that even in case of no rain, they do not worry now, as their investment has reduced by more than 50% in case of cotton. In case of crop failures, 39% farmers reported the reason for the low yield of the crop to be natural calamity (low rainfall). In case of crop failure, company did not provide any relief though it had not happened in the past yet.

Table 6: Comparison of Organic Cotton Contract price and Market Price for conventional cotton

Category	No of farmer	Comparison with market price		By How much (Rs.)		
	2	higher	equal	Up to 50	50-100	100-200
Marginal	10	2	0	1	1	0
Small	10	2	8	0	0	2
Medium	22	5	5	1	1	3
Large	**44 (100)**	9	13	2	5	2
Overall		**18 (40)**	**26 (60)**	**4 (9)**	**7 (15.5)**	**7 (15.5)**

Figures in parentheses show the percentages

All the farmers received higher than market rate for cotton due to the premium paid. But, there were differences in farmer perception of range of premium as they sold the crop at different time of the year. So, it ranged from upto Rs. 50 in case of 9%, Rs. 50 to 100 for 15% farmers, and Rs. 100-200 for another 15%. Only about 5% growers sold in the open market to gain from higher prices. All of the farmers came to know about the contract farming through extension network of the company. This indicates that the company is having strong networking with the farmers. As far as adopting contract farming was concerned, 84% of the farmer cited reduced input cost, 45% land improvement, 45% marketing facilities, 36% premium and 50% technical help on use of inputs.

All farmers wanted to continue to do contract farming under the guidance of the company. As major benefits, 73% of farmers cited better farming skills, 66% reliable income, 73% improved soil structure, 54% higher income and 7% considered new technology as benefit. The farmers were asked about the problems of contracting. Of the 44 contract farmers, 61% farmers delayed payment as a problem. Only 4% farmers reported poor inputs supply by the company. Mostly the farmers seem to be satisfied with the company.

There is no other farmers' organization in the area except this company i.e. Pratibha Syntex Pvt. Ltd. Only one farmer knew about MAIKAAL bioRe organic operations in the area. 68% of farmers described the contract farming good for them while 32 % were of the opinion that it is very good for them. Further regarding declining of area

under food crops, 75% found no decline in area. Only 25 % of farmers said that some area under food crops has declined. So far effects on labour market and the wage rates are concerned, all farmers responded that supply of labour has increased and wage rates have decreased as organic does not require that much hired labour especially as pesticides are not used that much now. This is quite a departure from other evidence on organic agriculture wherein labour use goes up with organic farming as it does use more labour (IFAD, 2005). The contract terms were also same for all categories of farmers.

Table 7: Distribution of growers by source of Contract farming information and reason for contract

Category		Contract information		Reasons for contract				
		Company staff	Relatives	Low invest	Land improv	Mkt.	Premium	Tech
Marginal	2	2	0	2	0	1	0	2
Small	10	8	1	7	2	7	6	4
Medium	10	6	0	9	6	4	3	4
Large	22	13	1	18	12	8	7	12
All	44(100)	29(66)	2(4.5)	37(84)	20(45)	20(45)	16(36)	22(50)

Table 8: Distribution of grower responses on major benefits for Contract Organic Farming

Category	Number of Farmers	Better skills	Reliable income	Better soil mgt	Higher income	New tech.
Marginal	2	2	2	2	2	0
Small	10	10	9	10	8	0
Medium	10	10	9	10	7	0
Large	22	10	9	10	7	3
All	44	32 (73)	29 (66)	32 (73)	24 (54)	3 (7)

Figures in parentheses show percentages

Table 9: Distribution of grower responses on Problems of contract farming

Category	No of Farmer	Delayed Payments	Poor Input Supply	No Reg. Purchase	Any Other
Marginal	2	2	0	0	0
Small	10	8	0	0	0
Medium	10	8	1	0	0
Large	22	0	1	1	1
All	**44**	**27(61.3)**	**2(4.5)**	**1(2.3)**	**1(2.3)**

Figures in parentheses show percentages

Table 10: Farmer perception of larger impacts of organic contract farming

Category	No. of Farmer	Effect of Contract		Decline in food crops	
		Good	Very Good	Yes	No
Mar	2	0	2	0	2
Smll	10	7	3	0	10
Med	10	8	2	3	7
Lar	22	15	7	8	14
Total	**44**	**30 (68)**	**14 (32)**	**11(25)**	**33 (75)**

Note: Figures in parentheses shows the percentages

All the farmers reported that Company has given them the new technologies for farming like bio- pesticides and bio-fertilizers. Only 25% of farmers reported that Company has given them drip irrigation facility. Out of 44 contract farmers, 64% farmers reported that they were provided with improved seeds.

Table 11: New technology introduced by the company

	New Technology		Type of new technology					
Category	Yes	No	Biofer	Biopes	Drip	Qlty seeds	other	
Marginal	2	0	2	2	0	0	0	
Small	10	0	10	10	0	6	1	
Medium	10	0	10	9	0	8	0	
Large	21	1	22	21	11	14	0	
Overall	43	1	44 (100)	43 (97)	11 (25)	28 (64)	1 (2)	

Figures in parentheses show the percentages

Table 12: Farmer Suggestions for Making Contract System more Effective

Category	Exp tour univ.	Quality seeds	Agro pro	Effective biopest	Home delivery	Copy of contract	Crop insurance	Drip irrn	More bonus	Far grd	Seed prod far level
Marginal	0	0	0	0	0	0	0	0	0	0	0
Small	2	0	0	0	3	1	3	2	1	0	0
Medium	0	1	0	0	3	1	1	3	1	0	0
Large	3	6	1	2	6	6	4	9	3	1	1
All											
%	11	16	2	4	27	18	18	32	11	2	2

Out of 44 farmers, 32% of farmers suggested that they should be provided with drip irrigation facilities, 27% of the farmers wants that inputs should delivered at their residence, 18% farmers want that the copy of the contract should be given to them, 18% of the them wanted crop insurance schemes, 16% of the farmers wanted adequate supply good quality seeds. Importantly, all farmers were of the opinion that if more no. of farmers will come under contract, their cost of certification will reduce. Moreover, the attack of insect/pest will also reduce as no insects will come from neighboring fields of non contractual lands.

Processing of cotton

Organic cotton products account for 10% of total cotton textile production. Out of a total of 50 spindles, four are used for organic cotton. The quality parameters include fibre length, fibre strength, elongatic elasticity and micronaires and color. There is a separate godown at the mill for the organic products. There are 30 knitting machines. The company has a readymade garments unit but branding and cutting is outsourced. The stain removing in case of organic textiles is done by water only as against chemicals in case of non-organic products. The final stages of manufacturing are pressing and ironing, tagging (brand, specifications, and price) and folding and packing. A total of 11 teams work on outer garment machines (casual wear) and a similar number on undergarment machines under the same roof. The ginning and pressing is done under job contract in certified mills (Appendix Fig. 5.2.1). The North American Draft Organic Fibre Standards are followed in spinning, knitting, dyeing and finishing processes for organic cotton. The company also imports organic cotton

from Turkey and Senegal and the price is 30% higher than the price of conventional cotton. The company also imports conventional cotton as it is cheaper and better quality than the Indian cotton.

Market for organic produce:

The major organic product is yarn which is exported to S. Africa, Singapore, Malaysia and S.Korea. The second important product is garments which are exported to the European countries and the U.S.A. Then comes fabric which is largely sold in the domestic market. Organic cotton products are of the order of Rs. 250 crore and account for 5% of total business in cotton. VASUDHA and NATURAL TOUCH are being registered as brands for domestic and export market (Appendix fig. 5.2.1).

The company supplies yarn to a dozen buyers like Benneton, Cavlin Klein, De-Cathion, GAP, H&M, Nike, J C Penny, Next and Woolworths (SA); fabric to another 10 to 12 buyers like Cavlin Klein, Dokcers, GAP, Hugo Boss, H&M, Mango, Nike, LandsEnd, SaraLee, Target, Tommy Hilfiger,and Zara; and readymade garments to another 10 to 12 buyers which include brands like Auchin, Bonbton, Beneton, Dockers, Galleries La-Fayate, Gerber, LAT Sportswear, Louis Phillipe, Muji, Monprix, Versand, Polo Ralph, Promode, Prana, Prinemps, Raymonds, Sara Lee,The Children's Place, Today;s Man, Van Huesen, Woolsworth (SA), Basic Thinking, Colors, Pepe Jeans and LIVING CRAFTS of Germany, besides Norm Thomson, Cutter and Buck, Eco Ganik and Katherine Hammet.

Codes of Conduct by Global Buyers

Some of the global buyers have their own codes of conduct on use of labour and protection of environment for the upstream stages of the chain which are to be followed by the chain partners like Pratibha. These codes are part of the corporate social responsibility of the global players. For example, NIKE code of conduct for manufacturer or supplier includes no forced labor, no child labor below 18 years in footwear and below 16 years in other products, no home based production, minimum wages, all mandatory benefits to labor, specified hours of work, environmental safety and protection, and documentation and inspection. NIKE is 5% organic in

conventional footwear and accessories. On the other hand SARA LEE (France) supplier selection guidelines includes ethical standards , no violation of national legal requirements , environmental protection , no child labor (below 15 years) and specified working hours.

It has also another company-NAVARANG BIOFOOD PRODUCTS PVT LTD for marketing of organic food products.

Problems in Organic Supply Chain

Other than cotton, Pratibha is also into wheat and soyabean, due to the need for giving entire crop cycle of organic crops to the farmers, but it could not market the produce of these organic crops due to small volumes and high cost of processing and packaging. It also tried organic turmeric production which was sold in bulk to other buyers. The major problem in organic market, as per the company perception, is lack of regular supply and quality besides the problem of storage. There could be common storage and processing facility to tackle the problems of small volume and high cost. So far as the institutional markets are concerned, they want a whole range of food items. The problem of multiple certifications for domestic and international markets and for different buyers also raises the cost and delays deliveries.

Appendix 5.21

Application Form

Subject: About undertaking organic farming

I am/would like to become a member of your organization from --------. I would like to sow organic crop (--------) in --------- acres as per the conditions of your contract agreement. I have -------cart/truck/trolley loads of cowdung manure and ------- animals. I have bought ------ trolley cowdung manure from another farmer.

Please permit.

Date ----------

Signature of farmer
Name
Village
Centre:

Appendix 5.22
Contract Agreement for Organic Production

Change in Field …… Year……. Category…….
Description of Organic Farm
……
……

Farm No.

I, …… a farmer, resident of village……Khasara No. …….. Patvari Halka No……...Total land……Acres.

First party (Pratibha Syntex Pvt. Ltd.)
Second Party (Farmer)

_____.
Agreement is done between First and Second parties.

1. I want to join the Organic Cultivation project of the Pratibha Syntex Pvt. Ltd. (First party) sponsored by the First Party for the Year:_____ Area of Organic Crop:_____ Acres.
2. I agree to maintain the international standard and condition applicable for the organic farming process. I will get certified the field according to the rules and regulations of IFOAM.
3. I will follow the guidelines and code of conduct for organic farming as advised by the Consultant /Field Coordinator of the First Party.
4. I understood completely the new Organic Farming method that does not allow the use of chemical fertilizers/pesticides in crops, seeds, and on cattle.
5. I will use only certified compost inputs or alternative inputs such as green manure, rock phosphate, Deoiled Cake (DOC) as advised by the first party in order to improve the fertility of land.
6. In order to protect crop from harmful insecticides/ diseases, I will use only certified products such as Neem, natural herbs or any other organic material.
7. I will follow the crop cycle advice given by the Field Coordinator/Consultant.
8. For betterment of environment, I will plant trees around the field.
9. I will use all the waste obtained from cattle /crops to convert it into compost and give it to farms.
10. I know very well that application of chemicals or non-permissible input/s on my crop or field is not allowed. In case I use the same without prior permission from the First Party, I would not be able to sell my crop at higher rate.
11. I will inform immediately to the Field Coordinator/technician/Company representative/Consultant if it seems necessary to breach any condition of the agreement. Field Inspector or any other representative of the first party has the right to abolish/terminate my membership as Organic Farmer without my signature with immediate effect, if I am found to use any of non permissible materials in my crop or field

12. I will keep my spray pump required for organic farming separately and will not use it for any other chemical pesticide or fertilizer. I will not give/borrow sprayer pump to any other farmers who are not practicing Organic Farming and I will provide it for testing from time to time as per the directives of the First Party.
13. During testing, if I am found guilty of using any of the non-permissible inputs, I will be the defaulter and my membership will be cancelled with immediate effect.
14. In case I can not practice organic farming in the entire land, I will keep separate the Organic field by using one meter border of any other crop (Buffer Crop) to protect Organic field /crop from the effects of chemicals used in other crops/fields. Buffer Crop may be maize, pigeon pea, sorghum, or castor oil.
15. I will provide samples of soil, plant, leaf, or flower to the supervisor /inspector for testing purpose.
16. First Party is responsible to purchase the crop when it is certified by the representative/inspector/consultant. For certification, following information is required:
    a) Proper record keeping for crops is compulsory.
    b) Farmer has to keep all circulars and formats issued by First Party up to date in all respects and produce the same as and when asked by the Inspector or any other representative.
    c) It is compulsory to co-operate with company representative for all the information required in organic farming about attack of insects/ diseases, soil quality, farm map, picking and harvesting details, sowing etc.
17. It is compulsory to inform Representative of the First Party about harvesting of crop so that proper arrangements for the storage of the crop may be made.
18. I am confident and will be honest for converting my farm into an Organic Farm and for this I agree to the following procedure:
    a) Annual membership of the organisation (Registration)
    b) Certification according to relevant category.
19. If I follow the rules and regulations of the Organic Farming satisfactory and fulfill all the conditions of Organic Farming, then it is clear that my entire crop /s ……..will be sold to Pratibha Syntex Pvt. Ltd. (First Party) or its representative but for other Organic crops, Representative/s of First Party will make efforts to get appropriate market and accordingly it will be sold.
20. I will keep all the records of Organic Farming myself.
21. I will give organic inputs like Azedobector, P.S.B., DOC, Bone meal, Rock Phosphate as per the recommendations of Field Coordinator.
22. Use of treated (with fungal chemicals) seeds is prohibited.
23. I will use self-prepared Organic solutions/preparations from Neem leaf /Neem seed and also preparations available in market, with prior approval for the same from the First party or its representative.
24. It’s compulsory for me to attend all the training and development programs for farmers.
25. I will not give any information to any News Channel / Newspaper or any other media without a written permission of the First party.
26. If I give /borrow Sprayer Pumps to/from any other farmer who is a conventional farmer or using chemicals fertilizers/pesticides, I will be considered a defaulter.

27. Before selling of any crop, I will take written approval from the First Party or its representative.
28. Crops cultivated in the field without using any non-organic products from the last two consecutive years will be treated as Organic crops in the third year.
29. In this agreement, I agree to sell all my crops, other than Cotton, i.e. soybean, wheat and pulses to the First Party (Pratibha Green Technologies Pvt. Ltd., Indore) at reasonable rates.
30. According to the quality of cotton, the First party will pay a premium of 15% on Mandi rates to the farmers in the form of inputs like seeds, DOC, Econeem, V.T. etc.
31. If there is no border separation in the field, it is compulsory for farmer to sow at least one meter wide border crop and it must be there for at least four months and its height should be one meter.
32. I would purchase other nutrients required for the crop myself, in cash.
33. Use of Genetically modified or Terminator seeds is strictly prohibited.

Signature	Signature	Signature
Farmer (second party)	Field Coordinator (organic)	Agril. consultant (organic)

Signature
(First Party) Pratibha Syntex Pvt. Ltd.
Authorized Signatory

Appendix 5.23
Details of Organic Inputs

Farmer's name: **Village:** **Centre:**

Area under organic production: Organic cotton: Other organic crops:

Name of the input	Qty. with the farmer	qty. per acre total	qty. from company
1. Cowdung manure		-	
2. Khali (deoiled cake)		100 kg.	
3. Rock phosphate		50 kg.	
4. Gypsum		50 kg.	
5. Pheromone trap		4 nos.	
6. Green illy capsule		4 nos.	
7. Chitkalri capsule		2 nos.	
8. Tobacco illy capsule		2 nos.	
9. Dypel 81		500 ml.	
10. Biolep		500 ml.	
11. Eco neem		500 ml.	
12. BD 501		2 gm.	
i) 0CCP		100 gm.	
ii) BD 500		50 gm.	
13. variety of organic cotton seed			
14. area under organic cotton in future			
15. NPV			
i) Heli			
ii) Spodo			
16. PSB			
17. Azotobecter Culture			
18. Rhyzobium culture			

Note: the above inputs are being asked by me voluntarily. I am bound to buy them and the quanity may be more or less than the per acre mentioned.

Date: Farmer's signature

Appendix: 5.24
Tentative Crop Plan and Yield Estimations 2005-06

Product	Status	Area Acres	Production Quintals	Total Area (Acres)	Total Qty in Qtl.
Cotton	ORG	1668	10008		
	IC-2	2938	17628		
	IC-1	7581	45486	12187	73122
Soybean	ORG	629	3145		
	IC-2	1109	5545		
	IC-1	2861	14305	4599	22995
Chili	ORG	126	1260		
	IC-2	222	2220		
	IC-1	572	5720	920	9200
Aniseed	ORG	63	252		
	IC-2	111	444		
	IC-1	286	1144	460	1840
Red Gram	ORG	79	395		
	IC-2	139	695		
	IC-1	358	1790	576	2880
Green Gram	ORG	94	376		
	IC-2	166	664		
	IC-1	429	1716	689	2756
Turmeric	ORG	6	60		
	IC-2	11	110		
	IC-1	29	290	46	460
Maize	ORG	189	1512		
	IC-2	333	2664		
	IC-1	858	6864	1380	11040
Sorghum	ORG	157	1256		
	IC-2	277	2216		
	IC-1	715	5720	1149	9192
Black Gram	ORG	63	252		
	IC-2	111	444		
	IC-1	286	1144	460	1840
Rabi					
Wheat	ORG	629	7548		
	IC-2	1109	13308		
	IC-1	2861	34332	4599	55188
Gram	ORG	157	471		
	IC-2	277	831		
	IC-1	715	2145	1149	3447
Wayad (Raj)					
Sesame	ORG	0	0		
	IC-2	0	0		
	IC-1	2500	6250	2500	6250

Note
Figures based on last year's crop patterns
Area in Acres and Yield in quintals

Appendix 5.25

Pratibha Syntex Ltd.
301, Apollo Avenue, 30-B, Old Palasiya
Indore – 452 001 (M.P.)

Vasudha

Farmer's Name:

Village: Code No.

Category:

Farm Produce Details
Year 200 -200

Organic Cotton Produce Details
Cotton

Date No. of workers Qty. of cotton picked (Kgs.) Total Quantity

Name and Details of Other Organic Crop/produce

Date No. of workers Qty. of cotton picked (Kgs.) Total Quantity

BIO DYNAMIC AGRICULTURE PROGRAMME
TRAINING RECORD

CONVERSION PHASE _____
NAME OF THE B.A.S. _____

DATE	TRAINER'S NAME	PLACE	TOPIC	REMARK	SIGNATURE

BIO DYNAMIC AGRICULTURE PROGRAMME
INSPECTOR'S VISIT RECORD

DATE	INSPECTOR'S NAME	FROM WHERE	FIELD NO.& AREA	CROP	REMARK

Farmer's Signature B.A.'s Signature Consultant Signature Inspector's Signature

PEST MANAGEMENT CHART

Boarder Crop

Spray Cleaned by Agent _____
Spray Pump Clearing Date_____
Remarked or Not _____

Name of Farmer Shri Monthly detail:

Date of Inspection / **Work for Organic**	**May**				**June**				**July**				**Aug.**				**Sept.**				**Oct.**				**Nov.**				**Dec.**			
Week of Month	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
After Sowing Week																																
Stage of Crop																																
Economic Threshold Level																																
Cut Worm%																																
Aphid																																
Jassid																																
Thrips																																
Caterpillar Detail																																
Heliothis Bollararm																																
Cater Spotted																																
Spodo Boll Ward																																
Pink Boll Warm																																
White Fly																																
Predator Details																																
Lady Bird Bittle																																
Chrysopa																																
Spider or any other																																
Botanical Spray																																
Need Seed / Seed / Econeem																																
Cow Urine																																
Any other Spray																																
B.T. Dipel																																
N.P.V.																					_____										_____	

Crop Age

⇧ Above ⇩ Low ⇧ + Insect Increase ⇩ - Insect decrease

= Eth

No. of Spray Pump _____
No. of any objectionable material found _____

_____

_____

CHART OF SOIL FERTILITY

Name of Farmer: Shri

Year: **Plant to Plant Distance:** **Crop:** **# of field:** **Date of Sowing:** **Variety seed:**

Qty.	Work for Organic	May				June				July				Aug.				Sept.				Oct.				Nov.				Dec.				Jan.			
	Rain	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	Date of Irrigation																																				
	Date of Compost																																				
	B.D. 500 Spray																																				
	C.C.P.																																				
	Azato bactor																																				
	P.S.B.																																				
	Rhizobium																																				
	Crop Stage																																				
	Lower to Normal / Above Normal																																				
	After Sowing Week																																				
	% of Seed Germination																																				
	Date of Weeding																																				
	Gypsum																																				
	Bone Meal																																				
	Top Dressing																																				
	Compost																																				
	D.O.C. Cake																																				
	Azato/P.S.B.																																				
	C.C.P.																																				
	Rock + Gypsum																																				
	Plant-Nutrient Foliar Spray																																				
	Slurry / Compost																																				
	Animal Urine																																				
	BD 501																																				
	Inter Crop																																				
	Name of Crop																																				
	Date of Harvesting																																				

Compost Purchased

Quantity of Compost

Purchased From

Self Animal Produce Compost Quantity

G. PROFORMA **SOIL FERTILITY MANANGEMENT** **PEST & PEST CONTROL**

S.No.	Fl. No.	Crop	Seed Source	Seed Variety	Dt. Sowing					Pest Control Used	Crop Harv.Dt.	Yield	Yield per Acre

CROP ROTATION

H-PROFORMA

Year …….

S. No.	FL.NO.	AREA	CROP	ORG. SINCE	LAST MONTH of Chem app.	YEAR …….		YEAR …….		YEAR …….		YEAR …….		YEAR …….	
						Kharif	Rabi	Kharif	Rabi	Kharif	Rabi	Kharif	Rabi	Kharif	Rabi

BIO FARM MANAGEMENT RECORD

NAME OF THE FARMER AGE _____ CODE NO. _____

VILLAGE _____ CENTRE _____ OTHER OCCUPATION IF ANY _____

Main Workers Name _____

Working since (in years) _____

Household head _____

Relation with the Farmer _____

Total land Area (in Acres) _____

Nos. of fields _____

Irrigated land (in Acre) _____

Source of Irrigation _____

Unirrigated land (in Acre) _____

Rented land (in Acre) _____

Partnership land (in Acre) _____

Boarders of fields _____

Bio-gas plant (if any) _____

Year _____

Bio Cotton Area (in Acre) _____

Nos. of fields (for bio cotton) _____

Conversion Status _____

Number of cattles _____

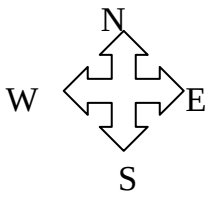
Total compost produced _____

Purchased Compost _____

Joining Year _____

UP – DATED – MAP / BLANK – MAP

YEAR …… FARMER'S NAME ……. VILLAGE …….. MANAGER ……..

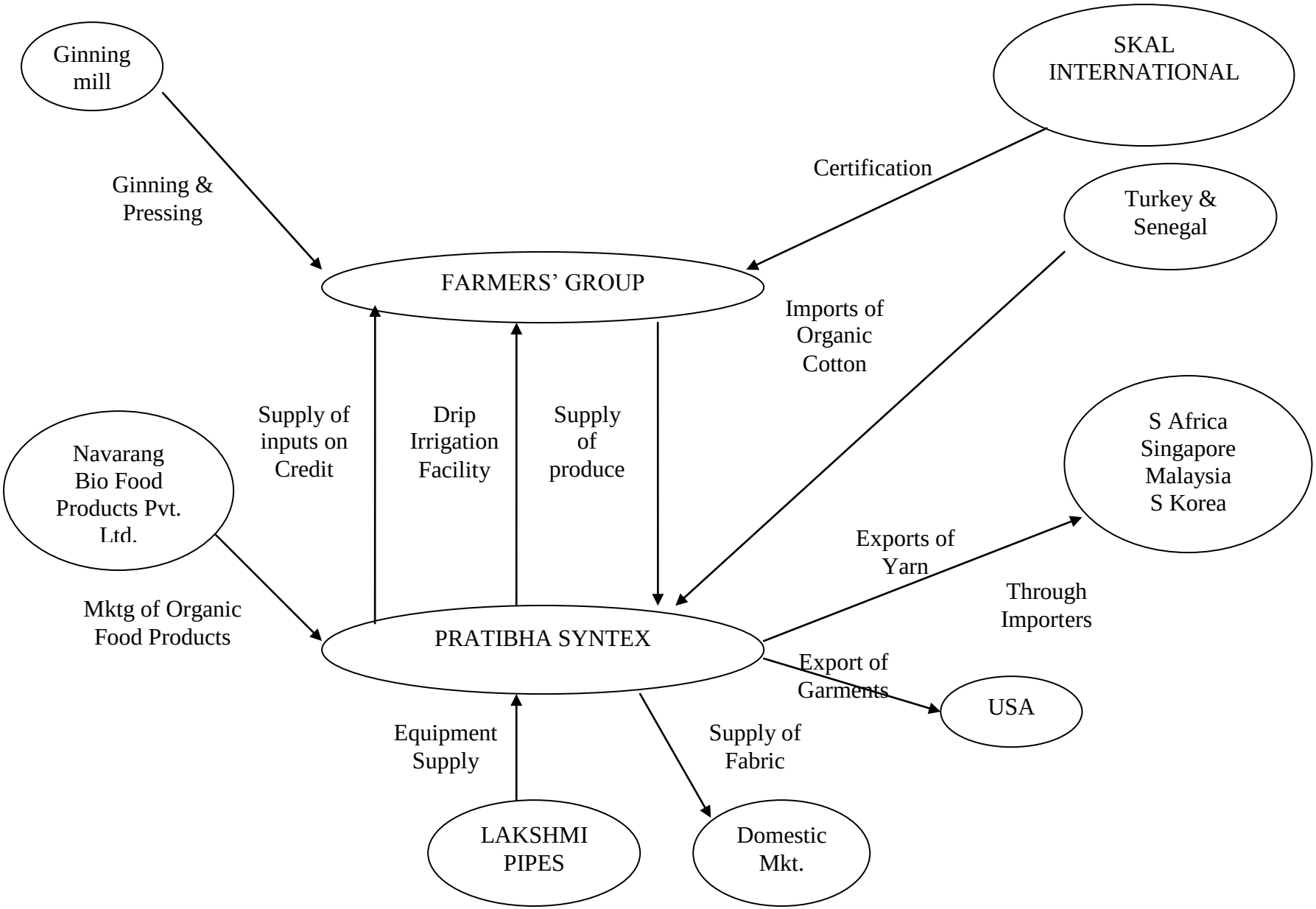


Field No.	Area (Acre)	Crop	Distance of village

SYMBOLS

	OPENWELL	- - - - - - - - - - - -	PATH		RIVER		PIPE LINE	**M**	MANGO
	TUBEWELL		HOUSE	~~X X X~~	ELECTRIC POL	**N**	NEEM TREE		TREE
	ROAD		VILLAGE		E. TRANS-FARMER	**B**	BABOOL	#####	RAILWAY

Appendix Fig. 5.21: Pratibha Organic Cotton Supply Chain



Appendix 5.3- Case Study 2

Agrocel Cotton: organic and fair

Agrocel Industries Limited is a closely held limited company having 89% stake of Shroff Family and 11% stake of Gujarat Agro Industries Corporation (Gujarat Government Enterprise) formed in 1997. It is a part of the Shroff Group of Companies which include: Excel Industries Ltd., Excel Crop Care Ltd., Transpek Industries Ltd., Trans Metal Industries, Hyderabad Chemicals Ltd., Punjab Chemicals Ltd., Parul Industries and Shroff Engineering. Shroff Group is well known for manufacturing chemicalswith in-house R & D. It has a staff strength of 250. The head office of Agrocel service division is located in Koday, Mandvi, Kutch. The Mandavi center, first of the company's service centres, was started in 1988 to promote judicious use of chemicals known as Integrated Pest Management (IPM) and then Integrated Crop Management (ICM) which focuses on soil fertility management, pest management and nutrient management.

Agrocel Industries operates through its two divisions: Agriculture Service Division and Marine Chemicals Division. The chemicals division is also into cosmetics in the area of health and Spa products like Marislimus - Fine mineral mud from the Rann of Kutch, used in facial masks and scrubs, body scrubs, soaps, shampoos, hair masks, and pedicure treatments, Sea Salt - Exceptional salt containing concentrations of: magnesium, potassium, calcium, sodium, and bromide. Used as an additive to bath water or as an ingredient for body scrubs, polishes, and wraps, bath bombs and teas, and foot scrubs and soaks, and Liquid Sea Minerals - This salt water is carefully collected by hand and then filtered for any impurities. It contains high concentrations of Magnesium, Potassium, Iron, Sodium, Silica, sulfide, and bromide. It is used as an additive to bath water or foot soaks or as an enrichment to body treatments such as massages and wraps.

Its a**gri-service division** provides input supply and marketing support to farmers, introduces technology for better yield, improved crop quality and reduced costs. Its mission is to make all possible agri-inputs and marketing support available to farmers at the right time and at a reasonable cost with all necessary technical assistance and

guidance under one roof so that farmers' farm productivity and income levels increase – all these through fair deals.

Agrocel was set up due to the Shroff family's involvement and concern for the Kutch region as they belonged to this region. After that other centres were opened in Kutch and other states of India. However, before this - in 1969, Kutch experienced a particularly severe drought. Chandaben Shrof of the Shroff family went there to assist in a famine relief project. During this trip, she realized that the rural women excelled at the local art of embroidery. This lead to the establishment of a not-for-profit making organization, called Shrujan, which now trains and provides work to 3000 women in hand embroidery and stitching. Shrujan was followed by Vivekanand Research and Training Institute (VRTI) which researches and trains to improve farmer areas with programs in water management, water harvesting, children education, employment generation and animal husbandry), which started in Kutch in 1975. It emphasizes on supporting farmers and rural development activities .This was followed by the setting up of a plant to manufacture Bromine, Potash and Magnisium compounds, in the Rann of Kutch in 1996 to use the raw material available in this region.

The underlying principles of its operations include: Extracting advantage out of difficult situation, local employment generation, achieving outstanding performance from local human resources, simplicity and low overheads, flat structured organization, social responsibility, fair trade, goodwill of the people, creative organization, and using group dynamics as a tool and with common clarity, common goal, and common direction.

Production organization

The commitment of **agrocel** is to bring to the market a high quality, traceable cotton fibre , promoting the **ethical and ecological** values through their registered brand . this ensures a long term future for small scale **cotton farmers** and their rural ecosystem high quality cotton fibre and improved yields are achieved by close technical **partnership** with farmers, starting from land preparation, all the way through to the agrocel cotton bank.

The organic cotton project started with 40 farmers and 300 acres of cotton in 1996 primarily for the export market. By 2003, it had 300 farmers with 750 acres of certified organic cotton and 800 tonnes of production (Menon, 2003) and 227 acres of SKAL certified sesame as rotation crop involving 120 farmers. Now, it has spread to 2000 farmers in Gujarat with 2000 acres of cotton and 16000 acres of sesame. Sesame is more concentrated in Dhragandhra (Surendranagar district) whereas Rapar (Kutch) has more of cotton, cluster bean, castor and Isabagol, besides sesame. Rapar has 149 certified organic cotton growers with more than 200 acres of organic cultivation whereas Surendranagar has 36 farmers and about 500 acres of organic cultivation and Mandvi only 8 farmers with 100 acres of organic acreage. It also operates in Haryana in organic Basmati with 450 farmers and 1500 acres of crop, and more recently, has moved into Maharashtra, Orissa, Uttaranchal, and U.P. It has total of 4000 farmers and 22000 acres under organic production in India. The Orissa project is an Integrated Crop Management (ICM) and fair trade project only. The Haryana project also takes care of projects in Utaranchal and U.P. (see basmati case study for more details). It invested Rs. 1.25 crore in 2000 in organic project.

Agrocel operates in the talukas of Mandavi, Rapar and Dhragandhra for organic produce procurement. Bt cotton has made inroads into Mandavi and, therefore, only few farmers are now as part of the organic project of the company. Thus, organic farmers are only a negligible proportion of the total farmers in Kutch. The organic variety grown for the project is Bunny 145 which is long staple cotton. Agrocel also sells Bt cotton seeds of legal varieties to conventional farmers as 99% of the farmers in the region are still conventional and it wants to continue relationship with them as future organic converts. It also takes farmers under the organic project after due convincing of the farmer and the consent of his family. The company staff visit the farmers regularly, sell inputs, give training and advice and control documentation for organic and fair trade certification (appendix 3 for Agrocel fair trade guidelines). For the conversion programmes the farmers have to declare the last date of use of chemicals. The guideline for farmer selection are also made use of.

Agrocel service centres offer a single window service to the Indian farmers in managing their profitability by improving the yields and quality of agricultural outputs. ASCs get involved from pre-tilling stage to post harvest management of the agri-produce. In this process ASCs also ensure enrichment of the soil in order to preserve the soil value. ASCs advice farmers for value addition of the agri-outputs and assist in marketing. Farmers are supported with a wide range of services like administration, testing and documentation for organic and fair trade certification, farmer knowledge exchange meetings, loans for agro-investments, and support for government subsidy schemes.

The organic Cotton Operations

The average size of land holding of agrocel growers in Kutch is 16 acres which is the same for Basmati in Haryana though in Kutch even this larger land holdings are not comparable with Haryana as they lack water and and are somewhat infertile. The leasing of land by farmers is allowed under the project if it is for 5 years at least. There are about 25% farmers whose entire farms are certified. The average area under organic cotton is 7.8 Acres. The cotton is largely irrigated and sesame largely rainfed.

Procurement

The contracts are individual and written due to certification requirement (appendix 1 and 2) and the farmers are organized into 'Agrocel pure and fair cotton/sesame growers' association' under the Societies Act due to the fair trade requirement. The farmers' associations monitor and resolve contract violations.

The company also gives premiums in-conversion cotton, which is same as for the certified produce i.e. market rate on delivery day plus 8% premium. The payment is made within a week by cash or cheque and the buy-back arrangement is for 10 years. There are no major defaults by the growers except poor quality of produce due to natural calamities. The quality of the produce is taken care by market price adjustments. The premium is for the organic component only. The fair trade premium is used for local community development. Farmers are allowed to wait for higher price. Company does not purchase non cotton organic produce like bajra and pulses.

Input Supply

The company has its own input supply like Verticel and also outsources them. It gives 50% subsidy on organic input and extension is totally free. Most of the Agrocel centers are also agri clinics. The drip irrigation subsidy (50% of cost or Rs. 50000/- per hectare whichever is lower) is provided by the Gujarat Green Revolution Company (GGRC) norms which has been allocated Rs. 1500 crore for drip irrigation promotion by the state government. The major schemes for promotion of organic inputs implemented by Agrocel include vermin compost, culture supply, free training, waste compost, and government subsidies provision for other inputs. A three-year advance planning is undertaken for organic production based on market assessment and commitments. It prefers a cluster of farmers in a village and conducts farmer meetings to introduce and explain its organic production programme. The organic cotton yield is lower, input costs also lower, but price is higher. The farmers who are interested in the concept and its practice are given 3-day training in organic farming. It has the status of nodal agency for credit from banks like ICICI, UTI and SBI. The company recommends farmers for credit, and procurement of produce ensures bank repayment. Only 30% of the credit is cash payment. Agrocel has arrangements with banks like ICICI and UTI bank for crop loans and bridge finance (procurement working capital) and drip irrigation with UBI. The Agrocel officers disburse loans and Agrocel gets a service charge of 0.5% (0.25% for disbursement and 0.25% for recovery). This arrangement is operatational only in Gujarat. The company goes by the market price payment due to the farmer defaults in fixed price contract farming in conventional produce crops elsewhere in the country. The criteria for farmer selection include willingness of the farmer, location of the field, crop requirement, and input availability.

It undertakes contract production of organic seed and buys non-treated seed from other seed companies. It also supplies seeds to other organic projects in cotton and Basmati. It had tried giving its centers to franchises but failed. It is focusing on better quality inputs and economies of sale for cost cutting.

Certification

The annual cost for certification is Rs.100-150 per acre and the certification cost is paid by the company. But, four groups in Kaithal and Kutch for Basmati and sesame respectively meet their own certification cost. The major problems in certification are ever changing standards, frequent change of inspectors by certification agencies, and lack of trust besides intrusion into farmer's household. Agrocel has 55 staff for ICS. There are farmer diaries and field registers for this purpose besides an agreement (appendix -2).

Agrocel has developed Indian organic standards for new regions like Orissa, jointly with International Resources for Fairer Trade (IRFT), VRTI, KVK and Jatan. It is certified as fair trade agency in cotton and other products by FLO and organic by SKAL International, besides its inputs being certified by Geochem and social audit being done by IRFT, Mumbai .

Certifying agency	**Product**
SGS	Basmati Rice, Cashew, Walnut
Geochem	Neem Cake
SKAL	All food crops and cotton products
IRFT	Fair Trade monitoring and social audit

The commitment by Agrocel to fair-trade means that the resulting products are purchased directly from farmers at premium prices. This direct link spares the farmers from the low margins and fluctuations of the international commodity market. Since agrocel provides total service to farmers, it can ensure that in every stage the criteria for fair trade are followed. Besides financial audit, social audits are published to demonstrate that Agrocel is not only focused on profits. Many of the buyers come and check personally the company's fair trade standards. Agrocel works with an own demonstration farm to test new practices and then convince the farmers. This enables it to know the real profitability of a crop and assess a fair price, thus giving transparency to the buyer for fair trade.

Farmer level performance of the organic cotton project

Kutch is the second largest district of the country (next only to Ladakh) located on the north-west frontiers of India. Spread over an area of 45,652 sq. km., Kutch occupies almost one-fourth (24%) of the geographical area of Gujarat State. Besides, it accounts for nearly 60% of the drought-prone area of the State. More than half (i.e. 23,310 sq. km. or 51%) of its area consists of saline marsh of the Great and Little Ranns of Kutch which bound the district on the north and east. It has a vast coastline of 352 kilometers with Arabian Sea that binds the district on the south-west. It receives a low average annual rainfall of 380 mm during the south-west monsoon with an average of 15 rainy days in a year. Sometimes it gets intense rainfall within 24 hours which is more than the annual average. Droughts are frequent – almost 6 in a cycle of 10 years. The temperature reaches up to 40 and often touch 50 degrees Celsius during the summer (April-June), while dropping to as low as below one degree during winter (January) in the interior parts of the district. Thus, it is beset with virtually insurmountable problems that are attributable largely to adverse natural factors. Frequent calamities each time pose new challenges.

Agrocel Industries Ltd, a service division, is joint venture with Gujarat Agro-Industries Corporation of Gujarat State. Agrocel's working in Kutch district of Gujarat state for the last 18 years. Agrocel has 14 Centres: eight in Gujarat, three in Maharashtra and one each in Orissa, Uttaranchal, and Haryana. The Kutch centre has six sub-centres within the district and two in the rest of Gujarat. The Company is engaged in contact organic cotton farming with the farmers since last five years. The company makes an agreement (appendix 2) with farmers that they will not use chemical fertilizers, HYV seeds, or insecticides/pesticides for their crops. Farmers have to use organic inputs and makes the farm pure organic. The company is engaged in production of organic cotton in six centres of Kutch district and Surendranagar and Vadodara district of Gujarat State along with other crops like sesame.

Table 1: Total number of Villages and Farmers under Organic Farming project in Rapar Area of Kutch

Village	Bhimasar	Bhutakiya	Bhangera	Kidiya Nagar	Padam Pur	Kanmer	Shirav Andh
Farmers	58	13	24	27	27	11	15

There are seven villages where Agrocel works with farmers for organic cotton production in Rapar taluka of Kutchh district (table 1) besides some villages in other talukas of the district like Mandvi, Bhachau and Bhuj. The numbers of contract farmers surveyed with a structured schedule in some of these villages in consultation with the field office staff of the company at Rapar is shown in Table -2.

Table 2: Village wise Total Farmers and Farmer under Contract Farming

S.No.	**Village**	**Total farmers**	**Farmer surveyed**	**% in total**
1	Bhutakiya	13	03	23.00
2	Padampur	27	05	18.52
3	Bhimasar	58	08	13.79
4	Bhangera	24	14	58.33
All		122	30	24.59

Table 3 reveals that there were 13% small, 27% medium and 60% are large farmers with an overall average land holding of 16.64acres. Of the total land, 60.74% was irrigated. There was no marginal holder as per the standard classification of land holders (< one hectare).

Table 3: Profile of Agrocel organic cotton growers in Rapar, Kutch (land in acres)

Category	**No of farmers**	**Total land holding**	**Avg. Land Holding**	**Irrigated land**	**Unirrigated land**
Small	4(13)	17.00(3.40)	4.25	17.00(5.61)	00(0.0)
Med	8(27)	77.27(15.48)	9.66	52.27(17.23)	25.00(12.76)
Large	18(60)	405.00(81.12)	25.31	234.00(77.16)	171.00(87.24)
All	30(100)	499.27 (100)	16.64	303.27(60.74)	196.00(39.26)

Figures in Parenthesis are percentages

About 47% of the total land was under contracts with the company across categories of farmers except small farmers who put almost entire of their land to organic due to smaller holdings per se. Further, 92.39% of land is owned by the farmers. Only large and medium farmers have leased in some land. The company avoids doing contract farming on short term leased land (table 4). About 70% farmers used tubewells for

irrigation followed by some who sued only dug well and a few large ones who used both.

Table: 4: Distribution of grower land by ownership and contract (acres)

Category	Own Land	Leased in	Under contract	Average land under contract	Non contract land
Small	17.00 (3.69)	0	14(5.96)	3.6	3(1.13)
Med	69.27 15.01)	8.00(21.05)	30.77(13.11)	3.84	46.5(17.58)
Large	375.00 (81.30)	30.00(78.95)	190(80.93)	10.55	215(81.29)
Total	461.27 (100.0)	38.00(100)	234.77(47%)	7.82	264.50 (100)

Figures in parentheses are percentage in total

Out of total 30 farmers covered, 13% were in the 2nd year and 77% were in the 3rd year of certification (Table 5). However 10% farmers doing organic contract production since last five years continuously. Thus, 87% of the growers were organic certified.

Table 5: Distribution of growers by Years of working with Agrocel

Category	No. of Farmers	Year of contracting		
		2nd	3rd	5th
Small	4	0	4	0
Medium	8	0	7	1
Large	18	4	12	2
Overall	30	4(13%)	23(77%)	3(10%)

Figures in parenthesis shows the percentages

Table 6: Farmer category wise Cropping Pattern on the Organic Farms

	Area under different Crops (acre)									
Category	Cotton	Bajra	Til	Moong	Math	Jowar	Guar	Chilli	Cotton (NC)	Others
Small	14.00	2.00	0	0	0	1.00	0	0	0	0
Medium	30.77	8.00	1.00	5.00	2.00	10.00	8.00	2.00	0	5.00
Large	176.00	49.00	43.00	21.00	13.00	52.00	26.00	0	24.00	0.25
Total 499.27	220.77 (44.22)	59.00 (11.82)	44.00 (8.81)	26.00 (5.21)	15.00 (3.00)	63.00 (12.61)	34.00 (6.81)	2.00 ().40)	24.00 (4.81)	5.25 (1.05)

Note: Figures in parentheses indicates the percentage

The cropping pattern is dominated by cotton, jowar, bajra and til with minor corps being guar, moong, moth, and chillies (table 6). All the farmers have been covered under total contract i.e. the company is providing all inputs, technical help and procurement services. All the farmers have been provided with inputs like seeds, biofertilizers,

biopesticides, and technical know how, financial credit in the form of inputs and certification support. However, only about 23% of growers, that too largely medium and large farmers were provided with drip irrigation equipments.

Table 7: Distribution of growers by Reasons for undertaking Organic Farming

Category	No. of growers	Land improvement	Low input cost	Input support	Assured Market	Technical help
Small	4	3	2	3	4	3
Medium	8	8	5	2	8	6
Large	18	17	10	13	14	12
Total	30 (100)	28 (93.33)	17 (56.67)	18 (60.00)	26 (86.67)	21 (70.00)

Figures in parenthesis shows percentages

Of all farmers, 93.33% farmer took to organic due to the fact that it helped them in land improvement, 56.67% because of low input cost, 60% for inputs supply by the company, 86.67% due to assured market and 70% for better technical help/guidance. Agrocel is providing some incentives to contract farmers. 50% of the farmers value incentives like higher prices as organic crop fetches higher price than the conventional crop. This is one of the reasons that small and medium farmers are shifting towards organic farming. Earlier, they had to purchase costly insecticides that too by borrowing money from moneylenders. Moneylenders used to charge huge interest from these farmers. But now these inputs are purchased from the company itself without any interest. The incentives contract growers value included market price plus some premium on their total organic produce sale and good quality inputs on credit and in time. The are under cotton has increased after the organic contract production, largely in the case of medium and larger farmers who almost grow double of what it used to be earlier. All the farmers agreed that their risk of crop failure has decreased as their inputs quality has improved considerably. Now, even in case of no rain, they do not worry as their investment has reduced by more than 50% in case of cotton. In case any instance of crop failures (low yield) reported by about 46.67% farmers, the reason was natural calamity (low rainfall). But, there was no help from the contracting company in such situations.

In case of receiving price, 50% of the farmers told that market prices are higher than contact prices, and 40% told that it was equal rate but there was also 40% premium also. The prices received by farmers for their contract produce was higher than market price. About 13% of the farmers reported the prices were higher by Rs 50 and 27%

said it ranged from Rs. 50-100, while 10% reported it ranged from Rs100-200 (Table 8).

Table 8: Distribution of growers by the Higher than market Prices Received for the Organic Crop

Category	No.of Farmers	How much (Rs.)		
		Upto 50	50-100	100-200
Small	4	0	1	1
Medium	8	2	3	0
Large	18	2	4	2
Overall	30(100)	4(13.33)	8(26.67)	3(10)

Figures in parentheses shows percentages

Table 9: Distribution of growers by Major Reasons for Contract Farming

Category	No. of Farmers	Reasons for Contracting				
		Low Investment	Land Improvement	Marketing Facility	Premium	Technical Help
Small	8	2	4	3	0	0
Medium	4	7	8	5	2	1
Large	18	15	17	16	4	4
Overall	30	24(80.00)	29(96.67)	24(80.00)	6(20.00)	5(16.67)

Figures in parentheses shows percentages

Table 10: Distribution of growers by Major Benefits for Contract Farming

Category	**Number of Farmers**	**Better skills**	**Reliable income**	**Better soil mgt**	**more income**	**New tech.**
Marginal	0	0	0	0	0	0
Small	4	4	4	4	4	1
Medium	8	8	8	8	8	0
Large	18	18	18	18	18	0
Overall	30	30 (100)	30 (100)	30 (100)	30 (100)	1 (10)

Figures in parentheses shows percentages

All the farmers came to know about the company through extension network of the company with some additional information being conveyed through friends and relatives about the organic program. The company is having strong networking with the farmers. Major reasons for adopting contract farming included low inputs cost (80%), land improvement (97%) and marketing facilities (80%), premium (20%) and the technical help on how to use inputs (17%).

All farmers wanted to continue organic farming under the guidance of the company. In case of major benefits, all (100%) of farmers told that they learn better farming skills, getting assured and reliable income, learn better soil management and earn higher income because of contract farming. Only 10% consider new technology as benefits. There are no other farmers' organization in the area except this company i.e. Agrocel Industries. But, there is one organisation called 'YUVA' an NGO. Which is very active and its extension officers go to the villages and do the extension for organic farming and use of solar energy.

Problems of Contract Farming

All farmers were very happy with the contract farming. 90% growers were of the opinion that it was very good for them and 10% described it as good. Further, regarding declining of area under food crops, 97 % of the farmers reported no decline in area under food crops. In response to effects on supply of labour and their wage rates, most of the farmers responded that that there was no negative impact as due to less work in organic production, labour was easily availabe (93%) and at reasonable wage rates (77%). It was also observed that the contract terms were same for all categories of farmers.

Table 11: Distribution of growers by Effect of Contract Farming

	Number of Farmers	**Effect of contract**		**Decline in food crops**		**Supply of Labour**	**Wage rate**	**Equal terms farmer**
Category	No.	Good	Very good	Yes	No	Increase	Decreased	yes
Small	4	0	4	0	4	4	4	4
Medium	8	1	7	1	7	8	5	8
Large	18	2	16	0	18	16	14	18
Total	30	3(10)	27(90)	1(3.33)	29(96.67)	28(93.33)	23(76.67)	30(100)

Figures in parentheses shows the percentages

Table 12: Distribution of growers by New technology introduced by the company

Category	**Bio Ferti.**	**Bio-pesti.**	**Drip Irrigation**	**Quality seeds**
Marginal	0	0	0	0
Small	4	4	4	0
Medium	8	7	6	0
Large	14	16	18	2
Overall	26 (100)	27 (90)	28 (93.33)	2 (20)

Figures in parentheses shows the percentages

All the farmers agreed that the company has introduced new technologies for organic farming i.e. bio-fertilizers and about 90% each acknowledged the introduction of drip irrigation and biopesticides (table 12).

Table 13: Distribution of growers by Suggestions for Making Contract System more effective

Category	Exp tour Agri-uni	Qlt ferti	Agro process	Effect biopesti	Home delvry	Copy of contract	Crop ins	Drip irrigation
Small	4	4	3	3	1	3	4	3
Medium	8	8	5	3	4	5	8	5
Large	17	16	17	14	9	14	15	11
Overall	29	28	25	20	14	22	27	19
%	(96.67)	(93.33)	(83.33)	(66.67)	(46.67)	(73.33)	(90)	(63.33)

Figures in parenthesis indicates percentages

The suggestions for making contract farming more effective ranged from quality inputs to crop insurance. Of the total farmers, 73% farmers want that the copy of the contract should be given to them and 90% of them wanted that crop insurance schemes should be provided to them. Some 63% suggested provision of drip irrigation facilities and 47% of the farmers wanted home delivery of inputs (table 13). All farmers were of the opinion that if more farmers will come under contract, their cost of certification will reduce. It is observed during the field work that farmers are ready to accept the new technology provided proper training and demonstration is given to them.

Storage and Processing of cotton

The raw cotton is stored at the farmer level and there are certified godowns for this. For ginning, there are two mills at Morbi and Vankaner which are certified by SKAL. Similarly, for spinning, there are certified mills at Morbi and Indore. The dyeing and washing is done in Mumbai (Appendix fig. 5.3.1). The garments are produced by the Vericott factory alone. The company has arrangements with oil mills in Amreli and Rajkot which are organic certified units. Value addition to cotton garments is done by artisans working with Shrujan – an NGO and family member of the Shroff group. It is setting up an organic park near Dhrangadhra as one stop shop for cleaning, packing,

grading and dispatch and will tie up with KVIC, Yusuf Merill, Mumbai and NDDB. It is also having cotton fibre bank, cotton yarn bank and organic seed bank.

Marketing of organic cotton and other products

Agrocel produces for the domestic as well as for overseas markets, thus balancing fluctuations of the market and therefore guaranteeing a stable income for farmers. It works in long term partnership with all buyers; this will provide farmers with a stable market and income and will ensure a buyer can make a real impact on a group of farmers. The organic cotton is long staple (28-30 mm), whiter and more lustrous than regular cotton. Its products are also certfied by SGS or Geochem or any other independent international surveying agency specified by the buyer. About 80% of the cotton is for direct and indirect export. There are 20 buyers of yarn. Besides, fibre bales are also sold to some textiles companies. It is also now starting the sale of fabric and exploring the retail channel.

Its major buyers include Marks & Spencer, Adidas, Nike, Reebok, and Gossypium – an ethical eco-cotton store in the U.K. which buys casual wear, yoga wear, baby wear, and bed linen from Agrocel (Nair, 2004). The partner agencies like Vericott Ltd. (**VER**tical **I**ntegration in **COTT**on, joint venture with Texas private Limited) created in 1996, and TraidCraft Exchange (which has been fighting poverty through trade since 1979 and is the largest UK fairtrade organisation. engaged in innovative and effective trade, providing vital income for producers in over 25 countries) do not ask for standards as they have long standing linkages with Shrujan, VRTI, and Agrocel. To meet the demand for a reliable Organic and Fairtrade cotton fibre, Agrocel Industries Limited, in conjunction with Vericott Ltd and Traidcraft Exchange, have defined and branded cotton fibre - Agrocel® Pure & Fair Indian Organic Cotton.

Table 14: Organic and fair trade product range at Agrocel

Fair trade, Conventional	Fair trade, Organic certified
Cotton: Fibre, yarn, fabric, clothing	Cotton: Fibre, yarn, fabric, clothing
Khadi	
Rice	
Basmati	Basmati
Groundnuts	Groundnuts
Sesame	Sesame
Cashew nuts	
Raisin	
Raw sugar	
Wheat	
Flour	
Mustard: black, yellow and brown	Mustard: black, yellow and brown
Gram: green, brown	

It also sells to Gossippium in the U.K which has two stores in the U.K. (Appendix fig. 5.3.1). Gossippium is a botanical name of cotton and the UK's leading organic and fairly traded cotton clothes' brand. Gossypium was created to support farmers, to create quality products made from natural fibres – the name means cotton. It claims that it lets farmer do their work, let them fix the price, ensures they are paid when they want, that they get the technical help they want. Gossypium ensures that it measures the true price of the products and that no one is exploited. It values people and the environment far more important than money. It claims to be a company with responsibility and limits at its core. It considers textiles as its area of competence and considers twin responsibility – to the cotton farmers and to the customer. It attempts a strong partnership between agriculture and textiles and strong dialogue between the consumers and the retailers who serve them.

It also sells to Bishops Trading Company, an NGO, in UK, products like T-shirts, and yoga wear for clients who suffer from skin allergies (Nair, 2004). Agrocel has a joint venture with Aura, a natural dies firm in Ahmedabad under the brand name of 'Satya'. It has a design partner i.e. Oxfam Belgium. It is also negotiating with Shoppers' Stop in Mumbai.

About 50% of the food products are exported and rest are sold in the domestic market through 18 centers of the company in six states under the Agrocel pure and fair brand since 2000. Agrocel has got national award for export performance in sesame as the world's largest organic producers with production totaling 3000 MT tones. Other than

export, sesame is also sold to Khadi Bhandar and Nature Care centers besides oil traders in Mumbai. It is also exploring supply of organic ingredients to a restaurant in Ahmedabad. Sahaj has been registered as another brand for food products now. The food items sold by the company include Basmati and sesame. There are institutional sales of sports T-shirts to Gujarat Sports Authority. It retails all products in non-plastic bags and packs and is a part of organic exchange in cotton.

The fair trade premium is used for insurance, education, land development, tree planting, water harvesting, health, and herbal methods. In Kutch, hired labour is not in practice. The fair trade premium is 13% of farm gate price and put in a separate account of the growers' association. It has linkages with sister organization like Shrujan for textile, weaving, and embroidery, Shroff Foundation Trust, V G Udyog Sangh for textile value addition, VRTI for drip irrigation, AKRSP for inputs, Picric for basmati, Traidcraft for cotton, and CEE for environmental research and action. Agrocel is of the view that it needs time, investment, and patience. Also, the growth rate in organic is not very high.

Appendix -5.31
CONTRACT BETWEEN
PRODUCER AND AGROCEL INDUSTRIES LIMITED

I, undersigned farmer, sign this contract in my full consciousness with Agrocel Industries Limited which has head office at Koday Four Roads, Mandvi, Kutch, Gujarat and branch office at Rapar, District-Kutch.

The contract contains the following points:

1. I join this fair trade group with my full understanding, knowledge and wish, without any pressure.

2. I understand all the aspects of fair trade business and will also include these aspects into my agricultural practices.

3. I will use all training and education provided to me by Agrocel into my agriculture.

4. I fully understand fair trade and will not use child labour in my fields.

5. I will give fair wages to labour, working in my farms, according to fair trade law and regulations.

6. I will also send my children to school and educate them.

7. Agrocel will buy with good support price. Therefore, I will pay utmost attention to grow good quality production.

8. Agrocel will deposit farmer premium in the separate account which is specially meant for producer Executive Committee and that will be used as decided by producers independently.

9. Agrocel will deposit the difference of market price and fair price decided by FLO into a separate farmers' account and distribute to them according to their sales contribution.

10. I will allow FLO inspector to visit and inspect my farms and other related premises and also accept the FLO suggestions and rules.

11. I will sell my seed cotton to any other buyer, and Agrocel or producer organization cannot push me to sell under FLO label.

12. I will not accept Agrocel interference into decision making of our producer Executive Committee.

For AGROCEL INDUSTRIES LTD. FARMER SIGNATURE

Date: Date:

Appendix -5.32
Skal International Farmer Agreement:

Name licensee		
Address licensee		
Licensee number		Country : India
Name of Field Officer (If any)		
Name and number unit		
Name of farmer		
Code/number unit		
Address of farmer		

1. I, as farmer, declare that I understand the international standards like the EC-Regulation 2092/91, Skal International Standards or IFOAM basic standards for organic agriculture, of which the most important aspects are:
   - No use of disallowed substances like artificial fertilizer or chemicals like herbicides, pesticides, insecticides, fungicides.
   - Maintenance and improvement of soil-fertility by an appropriate crop rotation, use of animal excrements, green manure and cultivation of legumes.
   - Control of pests and diseases by natural ways and control of weeds by hand or mechanically.
   - Use of untreated, and when available, organic propagation material.
   - Avoid contamination of fields and products with disallowed substances.
   - Label the certified products correctly as organic or under conversion to organic.
2. I declare that I work on my fields included into the inspection programme, and during the onfarm first processing of products, conform to the above mentioned international standards for organic production.
3. I will allow Skal International Inspectors access to all my fields and premises for inspection purposes and I will fully cooperate with them.
4. Only if no farmer-group, I declare that
   - Detailed map of the fields is maintained.
   - Adequate written bookkeeping of all incoming and outgoing products is available.
5. In case of non-compliance with the above-mentioned standards, I will inform the above mentioned field officer and/or Skal International licensee, and I will not sell the products as organic or under conversion to organic.

Date and Signature of Farmer Date and Signature of
Field Officer (if any)

Appendix -5.33

FAIRTRADE
OPEN STANDARDS

Agrocel Industries Ltd mission is to serve the farming community by providing high quality agricultural inputs and guidance all under one roof this at a fair price, technical guidance and agricultural output marketing with value addition.

Agrocel fibre is cultivated by small-scale Indian farmers and under the monitoring of Agrocel Industries Service Centre

With Agrocel support, the farmers have implemented environmentally sound agricultural practices, which as well as improving the quality of life of the producers has led to the production of organically certified cotton.

Agrocel offers a range of high quality fair trade and/or organic cotton and its products like yarn, fabric and garments.

1 – SOCIAL DEVELOPMENT

1-1 Understanding the local culture

Because Agrocel understands and respects the local culture and context, it has been able to develop a system of working with small-scale a farmers that has had a positive impact on them.

- Agrocel offers producers a price that covers the cost of production, but beyond this, aims to work with farmers towards reducing costs of production through appropriate & indigenous technologies and thereby increasing profits for the farmers.
- Agrocel offers fair trade and organic premiums
- Agrocel facilitates long term planning through offering high quality market information
- Agrocel has developed long term partnership with the farmers by offering high quality services and inputs at a fair price
- Agrocel supports the cultivation of multiple crops, keeping in mind the vagaries of nature, so that farmers have sustainable livelihood options. Production and Marketing services are also provided for these crops

1-2 Participation and Transparency

The majority of farmers that Agrocel works with are small producers providing more than 90% of the total production of Agrocel® cotton. Small farmers defined as size of the farm being up to 17.5 acres.

Many farmers have a partnership with 3 or 4 sharecroppers to work on the farms and share the proceeds of yields.

Agrocel® maintains accurate records and has a transparent administration, which enables information sharing with farmers, and an effective control by its board. This, in turn guarantees the maximum social and economic benefits to the cotton farmers Agrocel have published social accounts supported by international Resources for Fairer Trade in 1997, which are available on request. A second round of social accounts are in process at the moment.

Agrocel holds general meetings with all the cotton farmers at least twice a year to agree terms of trade and premiums.

Annual Accounts are available to the farmers and are available more widely on request

Agrocel recognises that clear communication is the key to maintaining long term partnership with the farmers. Agrocel and the farmers share information at the Agrocel service centre, through training and through regular visits to farms.

Agrocel believes in the integrated development of farmers. Towards this end, it encourages multi-cropping options. Agrocel services of advice, inputs, and marketing are available for all crops grown by farmers.

1- 3- Non- discrimination

Agrocel follows ILO convention 111 on ending discrimination of workers. The convention rejects any distinction, exclusion or preference made on the basis of race, colour, sex religion political opinion, national extraction or social origin, which has the effect of nullifying or impairing the equality of opportunity or treatment in employment or occupation (Article 1).

To guarantee the above Agrocel verifies this through their social accounts .
Agrocel promotes its services to all small farmers without discrimination.
Agrocel also supports the following local development projects

- Technical field service to farmers.
- Agricultural inputs under one roof at a reasonable price, of a good quality and timely supply.
- Support for agricultural commodities marketing with value addition for export and domestic markets.
- Export of Agricultural commodities to European Fairtrade Organisation
- Agricultural research and development, demonstration and training.
- Water management through drip and sprinkler irrigation and water harvesting programme with VRTI, a local NGO.

- Mini Oil Mill for Neem oil and Oil cakes for Organic Farming.
- Organic manure from Cow Dung and Agricultural Waste with Suthri Panjarpol, a local NGO
- Provide technical guidance, inputs to various Government departments.
- Social support to people affected by natural disasters (Earthquake, cyclone etc.)
- Saline Soil Reclamation Programme in Maharashtra.
- All Government Schemes for Agricultural development are routed through Agrocel Service Centres wherever they exist.

2 – ECONOMIC DEVELOPMENT

2-1 Training

Agrocel encourages farmers to make annual business plans, cash flow predictions and longer-term strategic plans. This helps the farmers reduce their expenditure on agricultural inputs

Agrocel provides free training .The training covers areas such as

- Seed management - selection of most suitable GM Free variety of cotton
- Soil management - increasing soil fertility, moisture holding capacity, as well as micro- organisms by sowing green manuring crops between 2 crops
- Water management - promotion of drip irrigation systems which, besides saving more than 60 % of water, it also improves the quality of the crop and also limits reproduction of harmful insects.
- better weed control as water and nutrient is fully available for the main crop
- Nutrient Management - With the use of portable soil analyst kits, Agrocel field officers are able to identify the exact nutrient requirements so that farms make best use of organic manure.
- Pest Management - The field is a bug eats bug world, in which a "natural enemy complex" of predator and parasite insects keep pests in check. Agrocel Field officers with the farmers monitor the insect population in order to calculate the ETL (Economic Threshold level) and based on that information prescribes the use of organic or natural pesticides.
- Overall management - Agrocel keep full records of the above, as well as data of production and quality of cotton. Those documents can then be used by any certification agency.

2-2 Market transparency

Agrocel recognises the need to enhance the farmers' position in the marketplace both locally and for export markets

Agrocel offers technical services on cotton to the farmers to improve the quality and therefore marketability of the cotton

Agrocel has a transparent purchasing policy. Seasonal meetings with farmers are arranged to fix the price on par with current market rates, based on which a premium is paid. This process clearly indicates the breakdown of the price to the eventual buyer.

Agrocel has developed market knowledge in response to the farmers' need to know where the cotton is going in order to influence the price they are paid
Agrocel has set up a cotton bank in order to:

- Support the sale of cotton at the optimum price
- Take advantage of the varieties and qualities of cottons produced by the cotton farmers
- To enable export if appropriate

Agrocel provides forecast for cotton requirements, enabling farmers to plan their production effectively.

Agrocel keeps accurate trading records, which enable transparency; farmers share those records in order to increase effectiveness of production.

Farmers are not obliged to sell their cotton to Agrocel

Where possible, Agrocel supports the marketing of organic products other than cotton that come from the farms that are certified organic.

Agrocel has established partnership with an UK Company in order to

- Access textile markets and develop new products.
- Obtain market information.
- Achieve the shortest possible supply chain for cotton, in order to deliver maximum benefit to the cotton farmers
- Ensure the most ethical and environmentally safe supply chains to serve our customers.

2-3 Fair trade premium

Agrocel based on the current market price the premium ranges from 5-10 % on the seed cotton.
Agrocel is transparent and flexible about the way it administrates and manages the fair trade premium. By paying better prices for product that is of better quality, as well as providing training in how to do this, Agrocel is stimulating improvements in production, leading to the strengthening of the farmers economic position.

Agrocel also trains and employs some of the local farmers to become Agrocel field officers in order to:

- Ensure that the training and guidance offered is in line with what farmers need

- That it is delivered in a form that is appropriate for the farmers
- Maximise opportunities for Agrocel to receive accurate feedback from their farmers.

3 – ENVIROMENTAL DEVELOPMENT

3-1 Organic Practices

Agrocel encourages the cotton farmers to implement organic farming principles. This is with the aim of establishing a balance between environment protection and business results Through an ongoing monitoring of economic and environmental parameters, an integrated cultivation and protection plan is devised and continuously being adapted.

3-2 Marketing support

Agrocel supports farmers in the process of converting to organic cultivation, and helps them find markets for all other products on these farms.

4 - STANDARDS ON LABOUR CONDITIONS

Agrocel ensures that the conditions laid out below are complied within the organisation
Farmers are clearly informed in the course of training and visits about these standards. They are aware that breaches of these standards would mean Agrocel could not buy their cotton until the standards had been improved.
Farmers are also informed about the standards through brochures mentioning the agronomic practices.
Agrocel ensures farmer compliance with these standards through regular visits by field officers, some of which are unscheduled.

4-1 Forced Labour and Child Labour

Agrocel follows ILO Conventions 29, 105 and 138 on child labour and forced labour. Forced or bonded labour is prohibited and ensured. . Children may only work if their education is not jeopardised. If children work, they must not execute tasks, which are especially hazardous for them due to their age.

- Forced labour, including bonded or involuntary prison labour does not occur.
- Abuse of child labour is not allowed.
- Working does not jeopardise schooling.
- The minimum age of admission to any type of work which by its nature or the circumstances under which it is carried out, is likely to jeopardise the health, safety or morals of young people, shall not be less than 18 years.
- Employment is not conditioned by employment of the spouse. Spouses have the right to off-farm employment.

4-2 Freedom of Association & Collective Bargaining

Agrocel follows ILO Conventions 87 and 98 on freedom of association and collective bargaining. Workers and employers shall have the right to establish and to join organisations of their own choosing, and to draw up their constitutions and rules, to elect their representatives and to formulate their programmes. Workers shall enjoy adequate protection against acts of anti-union discrimination in respect of their employment.

- {Agrocel recognises in writing the right of all employees to join an independent trade union, free of interference of the employer, the right to establish and join federations, and the right to collective bargaining.
- The organisation allows trade union organisers to meet all the workers, and allows workers to hold meetings and organise themselves without the interference of the management.

4-3 Conditions of employment

Agrocel promotes the ILO Plantation Convention 110, ILO Conventions 100 on equal remuneration and 111 on discrimination. All employees must work under fair conditions of employment. The producer organisation must pay wages in line with or exceeding national laws and agreements on minimum wages or the regional average.

- Salaries are in line with or exceeding regional average and official minimum wages for similar occupations..
- Payments are made regularly and in legal tender and properly documented.
- Other conditions of employment like maternity leave, social security provisions, non-monetary benefits, etc. are followed.
- All workers are employed under legally binding labour contracts.
- The organisation works towards all permanent workers having the benefits of a provident fund or pension scheme.
- An adequate sick leave regulation is put in place.
- A working hours and overtime regulation is put in place.
- Salaries are gradually increased to levels above the regional average and official minimum.
- Differences in the conditions of employment for casual, seasonal and permanent workers are progressively diminished.

4-4 Occupational Health & Safety

Agrocel follows ILO Convention 155 which aims “to prevent accidents and injury to health arising out of, linked with or occurring in the course of work, by minimising, so far as is reasonably practicable, the causes of hazards inherent in the working environment.”

- Workplaces, machinery and equipment are safe and without risk to health.

- Among the workers' representatives, a person must be nominated who can be consulted and who can address health and safety issues with the organisation.
- Those who are handling agrochemicals are adequately trained in storage, application and disposal of these. They are actively informed of all relevant information on the product they are handling . This information is provided in the local language.
- Adequate personal protective equipment of good quality is available and appropriate, especially for the use of agrochemicals. Workers have access to this.
- The following persons are not allowed to work with the application of pesticides: persons younger than 18 years, pregnant or nursing women, persons with incapacitated mental conditions; persons with chronic, hepatic or renal diseases, and persons with diseases in the respiratory ways. This information is provided to farmers and workers in the area
- Workers' capability and awareness of the chemicals they are using, relevant health protection and first aid is improved through training.
- Collective risk assessments are carried out regularly.

(As of August 2002)

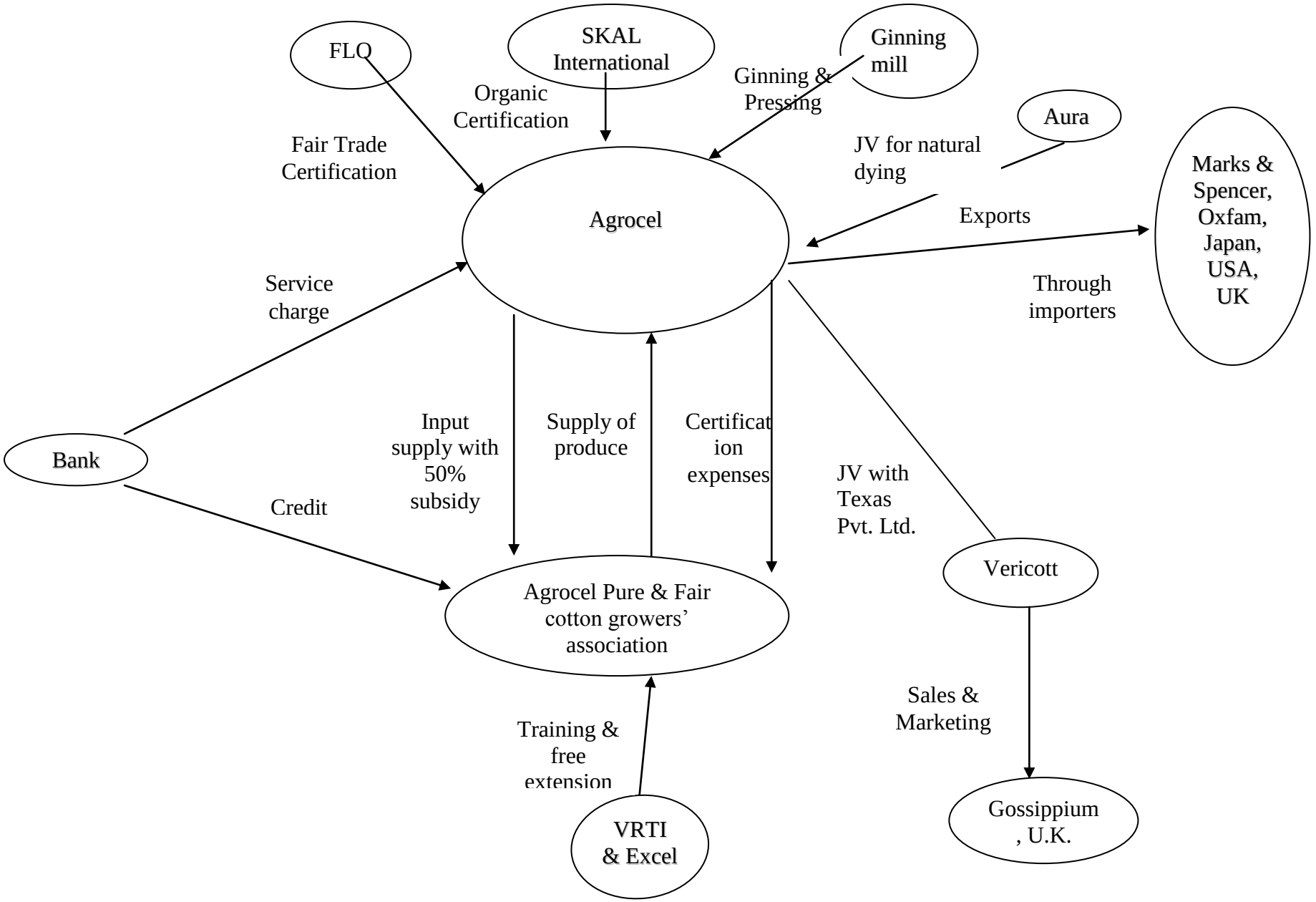


Fig. 5.3.1: Agrocel Organic Cotton Supply Chain

Appendix 5.4- Case Study 3

Chetna Organic: Organic Cotton for Development

The Solidariada-ET project in India (Chetna Organic) aims at creating a farmer owned producers' company in organic produce by 2010 (see figs. 1-3). It will be a federation of small organic Indian farmers from Andhra Pradesh and Maharashtra, growing healthy crops for a fair price. It is supported by Solidaridad and ICCO, the Netherlands which have long experience in fair trade, and managed by ETC India Consultants Pvt. Ltd. together with a consortium of seven NGOs in AP and Maharshtra (Appendix Fig.5.4.1). The purpose of the project is to set up a farmers' own Organic Cotton Growers' Association (OCGrA). It is certified by Skal International as organic and by FLO Cert as fair trade.

There were 240 farmers organised into 16 groups in 16 villages in two states (A.P. -12 villages in 4 districts and Maharashtra- 4 villages in two districts) for this project with 1000 acres of land. It is now working with 410 farmers in two states and has organic acreage of the order of 4000 acres of which 2000 is under cotton. The average size of holding is 4.9 acres and 90% growers are in in-conversion category. The project had 11 organic certified farmers in Maharashtra with 7 in Mortizpur and 4 in Yavatmal with acreage being 87 and 62 acres respectively. There are two more sets of farmers i.e 32 and 30 respectively who are in in-conversion as of in 2005 with 260.5 and 178.5 acres respectively. On the other hand, in AP, all the farms were in in-conversion stage. They numbered 129 and of these 37 were in Karimnagar with 109 acres, 11 in (Kerameri) Adilabad with 93,5 acres, 7 in (Nirmal) Adilabad with 57.75 acres and 74 with 158 acres in Mehboobnagar. Their land holdings ranged from 2-42 acres in Karimnagar with most having 5-7 acres, 2-48 acres in Kermeri with 7 having 10 plus acres, and 4-18 acres in Nirmal (Adilabad). Total AP and Maharashta certified area was 149 acres and in-conversion 851.25 acres. And, there were a total of 191 in-conversion farmers in the two states (table1). The major certified crops were cotton, green gram and soyabeans in AP and cotton, red gram and soyabeans in Maharashtra.

The proposed producer company (see figures 1, 2 and 3) is supposed to have entry fees, membership fees, turnover percentage for producer training and credit, bonus to members, if and when earned profit, and fair trade premium for local development. The main objectives are organic certification, empowerment of farmers, and improving labour conditions.

Production and Procurement with NGO partnerships

The NGOs which work with the project are: KVAS, VOFA, VELUGU, BASIX, PDIS, CEC and KRUSHI. The project gives a loan of Rs. one lakh to each group from the revolving fund given to the OCGrA, at 15% interest and to be repaid within the crop season. The yields (4 qtls. as against 2 qtls. in conventional cotton) and input cost are lower (Rs. 18,00 compared with 3400 in conventional cotton) but prices are higher for organic cotton by about 10-15% compared with conventional cotton prices in the market. There is a third party agreement between ginner/spinner and farmer groups for sale of cotton. There have been cases of seed failure due to local seed use or failure of rain. Farmers also agreed that organic lowers cost, improves soil health and gives better returns. There were also other SHGs and Raithu Mitras in the villages besides the dairy cooperative society. The farmers were happy with the project except that the price and marketing remains an issue and a challenge for the project.

In AP, majority of the organic cotton producers are small and marginal farmers who grow both local and long staple varieties with branded seeds especially certified ones. The yields are only 2-3 qtls per acre and cotton is stored in common facility most of the time. Organic cotton procurement is longer (5-7 month) and certified farmers are more organised in marketing though sell only to single channel (sponsor) with price premium of 15-25%. They are also more quality aware but do not understand the market situation. They need quality seeds, marketing outlet and storage facility in neighbourhood besides financé for conversion to organic.

Table 1: District wise Number of Farmers under certification in ETC-Solidaridad Organic Project in 2004-05

District	No. of farmers (certified)	Acreage (acres)	No. of farmers in in-conversion	Acreage (acres)	Total No. of farmers	Total acreage (acres)
Akola (Maharashtra)	7	87	32	260.5	39	347.5
Yavatmal(Maharashtra)	4	62	30	178.5	34	240.5
Kermeri (A.P.)			11	93.5	11	93.5
Mehboobnagar (A.P.)	-	-	74	158	74	158
Karimnagar (A.P.)	-	-	37	109	37	109
Nirmal (adilabad)(A.P.)	-	-	7	57.75	7	57.75
Total	11	149	191	857.75	202	1007.75

Source: Solidaridad-ETC Project, Hyderabad

Figure -1

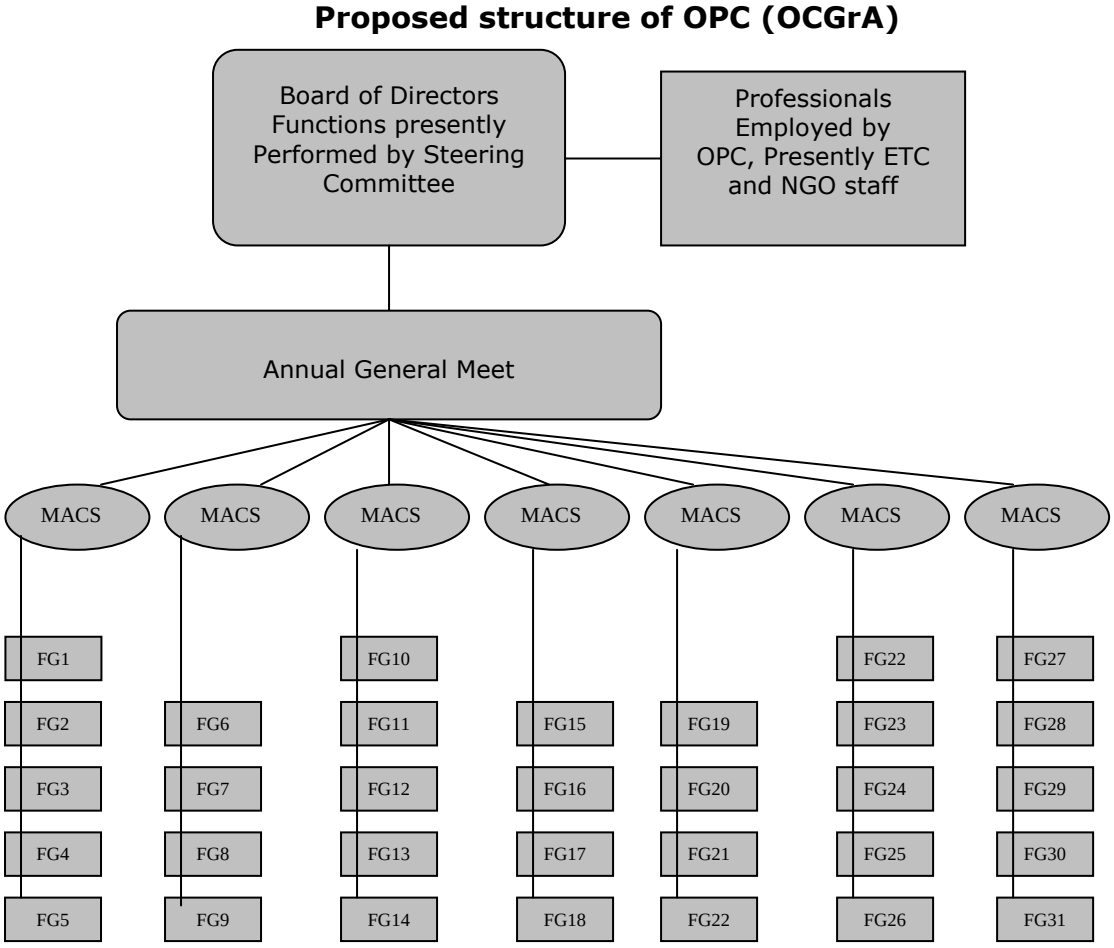


Figure -2
Sub Structures of OCGrA (by 2010)

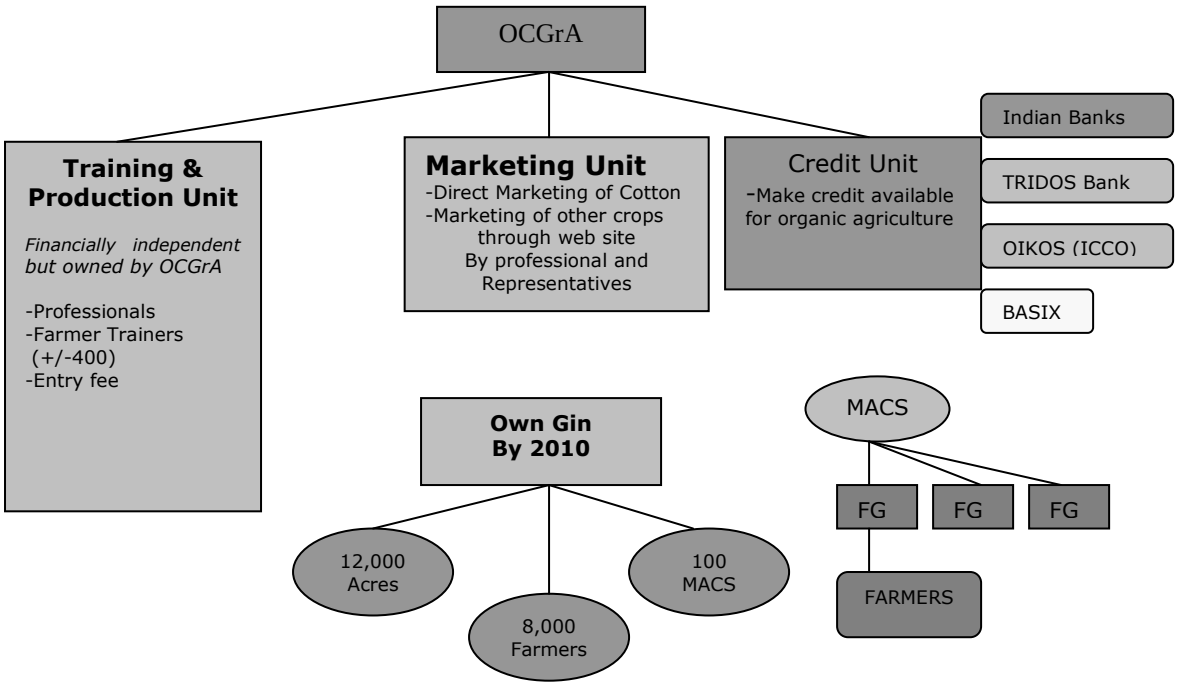
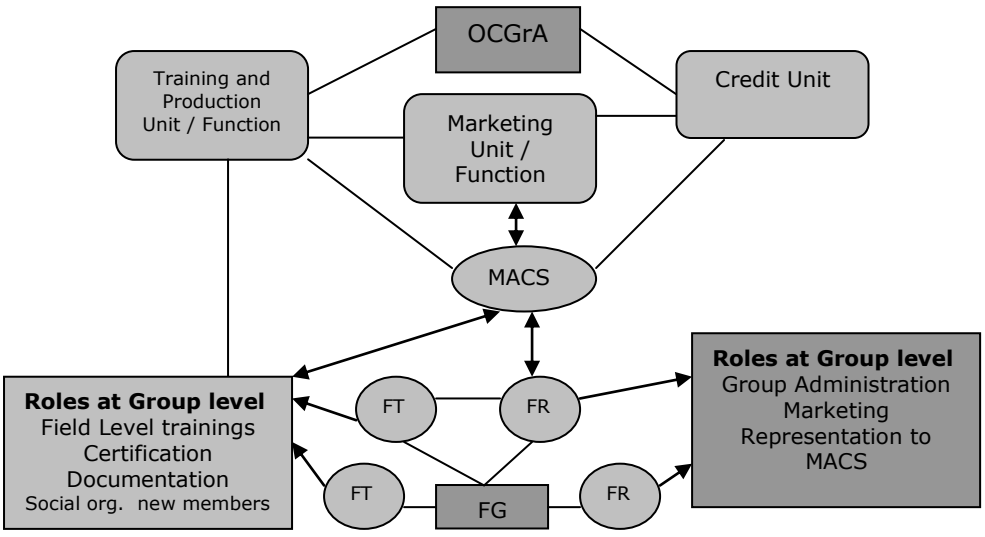


Figure-3
Farmer Trainers (FT) and Farmer Representatives (FR)



A focus group study of two groups of the project in A.P revealed that the holdings of the group of 29 members including four women (Arepally village in Karimnagar)

ranged from 1.5 acres to as much as 40 acres, with total land holding being 179 acres and the average being six acres. They had an organic acreage of 64 acres of which 48 acres were under cotton. Besides cotton, other crops grown were Bengal gram, soyabean as an intercrop, tuar dal and black gram. The produce was directly stored in common godown at the village after harvest in the field, hired at the rent of Rs. 500 per season.

There were 9 members of the producer group in Repaka in Karimnagar district with 109 acres of land with the average for the group being 12 acres. The cotton acreage was 31 acres and total organic 42 acres with 11 acres under other crops. One member had sprinkler system on half a nacre of his farm of 10 acres. The member group had three year contract with the project. The organic cotton average per farmer was 3.4 acres. This village also had a women's SHG with 25 members and all the members of the cotton group were also members of the SHG. The group sold cotton (80 qtls.) at Rs. 1700 per qtl. for Rs. 1,23000 to local traders who in turn will sell to ginners. This rate was lower than the market rate for conventional cotton (Rs. 1900). The project provides all the organic inputs on credit and certification and credit support. The cotton acreage varied from 0.5 to 7 acres and farmers altogether had sown 6 varieties. The farmers were not happy with the (low) sale price of organic cotton. The villages had also gone for Bt cotton this year. This village had plenty of local organisations of producers like 25 SHGs of women, one raithu sangha, 8 raithu mitras and one Dairy Co-operative Society besides a Sheep Rearers' Association and a Washermen's Association, and a youth club. It was a village with 500 hhs and 2500 population. This village had better cotton yields and this had encouraged more farmers to join the project.

Krushi (an NGO) which was working in both these villages since 1996 had operations in 465 villages in Karimnagar and Nizamabad. It worked with 300 and 800 farmers in Arepally and Repak villages. The NGO role in the project is to organise farmers, do institutional building, transfer technology, make credit available. Both the villages have mixed gender SHGs. It hasa federation of SHGs at the district level called SAMTA which is a MACS and all-women in its membership. It has a credit rating of A- and 100% repayment record. The project provides it three staff and Rs. 100 per farmer as support for farmer organization to this NGO. The NGO staff assists in ICS

and certification along with the project staff. There are three year long contracts with groups subject to annual review. The NGO has 500 staff.

The Chetna project uses farmer field school approach to train farmers. The farmer field school (FFS), based on an innovative, participatory, learning by discovery approach, has been the success story of the 1990s. The FFS approach was developed by an FAO Project in Southeast Asia as a way for small-scale rice farmers to investigate, and learn, for themselves the skills required for, and benefits to be obtained from, adopting integrated pest management (IPM) practices in their paddy fields.

Subsequently the FFS approach was extended to several countries in Africa and Latin America. At the same time, there has been a shift from IPM for rice based systems towards other annual crops, vegetables and cotton and the curriculum has been enriched with other crop management aspects. More recently, farmer field schools on the principles and practice of integrated soil and nutrient management have been piloted in Asia. It has been found that the FFS approach, although originally developed for IPM purposes, provides a proven people-centred learning methodology whereby farmers can learn about, and investigate for themselves, the costs and benefits of alternative soil management practices for sustaining and enhancing farm productivity.

The **FFS** approach offers an alternative to the traditional extension approach in which farmers are passive recipients of externally formulated extension messages that are demonstrated to farmers by the field assistant. The approach is aimed at exposing farmers to a learning process in which they are gradually presented with new technologies, new ideas, new situations and new ways of responding to problems. The knowledge acquired during the learning process can be used to build on existing knowledge enabling farmers to adapt their existing technologies so that they become more productive, more profitable, and more responsive to changing conditions, or to ado*pt new technologies. There is now a rapidly growing awareness that a much more participatory approach is required if extension recommendations are to be fully acceptable - technically, socially, environmentally and economically.

ICS

The documentation maintained for ICS (figure 4) for certification by SKAL included farm dairy with details of inputs bought and used and output sold and accounts (see Appendix 5.4.1) and a storage register (Appendix 5.4.2) at the village level for common storage including procurement list with yield and certification details, weighment at gin, grade certificate and spinning test and receipt report, and the grower passbook. In each village, there was one project staff to monitor the crops and groups. It had a total project staff of 24. Most of the local co-ordination and monitoring is done by partner NGO staff.

Figure 4: Farmer Diary of the project for ICS

No.	Farmer Code	State	District	Taluk	Village	

SHG	Name of NGO	Name of Farmer	Date of Joining	Date of Leaving	Date of Applied Synthetic Inputs

Area under cotton (Acres)	Cotton Variety	Area under other crops (Acres)	Other crops	Area under conventional Farming (Acres)

Projected ORGANIC COTTON yield (Qtl.)			Actual ORGANIC COTTON yield (Qtl.)		
< 27 mm	27 - 29 mm	> 30 mm	< 27 mm	27 – 29 mm	> 30 mm

Projected yield (Qtl.)				
Green gram	Black gram	Red gram	Maize	Soya

Actual yield (Qtl.)				
Green gram	Black gram	Red gram	Maize	Soya

SKAL selects farmers or groups based on the following criteria:

1. Suitability of farm for the new crop, attitude of farmer and commitment to organic farming

2. Source of seed as seeds are expensive and treated seeds are not allowed in organic farming
3. Conversion management based on farm history and sources of contamination
4. Separation of field from conventional and GMO fields which requires contiguous area, buffer zones, bearers, boundaries, buns and field identification and labeling
5. Soil fertility management which includes next cropping, rotation organic matter external inputs and micro nutrients
6. Pest and disease management
7. ICS including book keeping
8. Transport and storage
9. Packing and labeling

It was found by SKAL that the concept of soil fertility management was not clear in the project are where mixed cropping was substituted by inter-cultivation and crop rotation was not followed due to small holdings. Even organic matter was not available due to lack of animal husbandry and micro-nutrients analysis was not undertaken. On the other hand, the concept of farmers' field school for pest and disease management was well practiced though it needed simplification, customization and local resource persons. The ICS in place is also good. But it needed to be customized, consigns, easy and in local language. On the other hand transport and storage arrangements were good and labeling needed to be clearer with projected details and packaging and transport improved as there could be contamination due to labeling with labeling ink which contaminate cotton and lack of clean trucks.

Post-harvest operations

All of its post harvest operations like ginning, spinning and garment manufacture are outsourced or done under agreement with spinning mills (Rajlakshmi and SSM) and garment manufacturing mills (Rajlakshmi) (Appendix Fig. 5.4.1).

Marketing of Organic produce

The project produced about 350 qtls. in Maharashtra and 450 qtls. in AP (total 800 qtls.) of organic cotton, half of which was sold to Super Spinning Mills, Coimbatore and Rajlakshmi Mills, Calcutta. Super Spinning Mills is also involved in contract farming of conventional cotton with more than 1200 growers across five districts of Tamilnadu covering more than 3600 acres of cotton area in 2004 (Agarwal et al, 2005).

The mills refused to buy the rest as there were many varieties (30-40) grown by the producers which was not considered good in terms of quality. The non–cotton products were pulses which were sold to Sresta Natural Bioproducts Ltd. Hyderabad. The cotton quality in terms of staple length was: 20% cotton being below 27 mm, 40% with less than 30 mm, and 40% less than 32 mm. Many international buyer chains like MADE-BY Netherlands, CTM, Italy are supporting the organic cotton project.

This project has also been able to rope in some European buyers like Made by from Netherlands and C.T.M. from Italy who have agreed to support in conversion cotton production. Rajlaxmi Cotton Mills, Calcutta is also willing to use short staple cotton for high quality bathwear. EU is planning to print notes on organic cotton paper.

Problems in Supply Chain

Production level

The more recent problems include that of sustaining farmer interest e.g. two groups left the project due to crop failure, and some farmers also switched due to Bt cotton attraction. Though standards expected are complex, the younger members of the family who are literate generally can be involved. The other problem is that of dealing with conversion period produce esp. when farmers expect premium prices.

The cotton quality is of 3 grades-less than 27 M.M. (24s Yarn,), which is 20% of the total, less than 30 M.M. (30s Yarn) which is 40% of the total and less than 32 M.M.

(40s Yarn) which is rest 40%. The quality control is more about process, not products and includes ecological and social standards besides the adoption of H.A.C.C.P. approach from field to factory. The solutions to the quality problems range from that at the farm level to that at the gin level (Figure 5). At the farm level, it is more about irrigation, organic fertilizers and clean picking. At the household level, it is the problems of moisture, pest, foreign fibers and contamination which require drying in open, hand cleaning and bagging and separation. At the common storage level, there are again issues of moistures, pest attack, theft and contamination which require local action. In terms of transport, the issues of theft, mixing bags and contamination require farmer representative on the truck, labeling of bags and cleaning of the truck before loading. Finally, at the gin level, contamination control requires cleaning of floors and machines.

Figure 5: Problems of Quality control in organic cotton and possible solutions

At HH level				
Problem	Moisture	Pests	Foreign fibres	Contamination
Solution	Drying	Drying in open	Hand cleaning	Bags/separation
At village level				
Problem	Moisture	Pest	Theft?	contamination
Solution	Moisture check meter	Crab powder	Locks/storage and register	Bags, separation and storage register
At truck/transport level				
Problem		Theft	Mixing of bags	contamination
Solution		Farmer representative on truck	Labeling of bags	Demand cleaning of trucks
At gin level			Quantity doubts	contamination
Solution			Check again	Cleaning staff for floors and machines

Certification Issues

So far as certification by SKAL is concerned, the criteria for farmer/group selection include suitability of farm, attitude of farmers, and commitment of farmers to organic production. The agency found Maharashtra farmers to be more committed.

The seed source was another aspect wherein seed source could be conventional, treated seeds. Therefore, it is better to have a seed component in any organic farming project.

The conversion plan involves farm history and contamination sources identification. The field separation is required from conventional and GMO crops fields for which contiguous area approach can be followed and other measures like buffer zones, barriers, boundaries and bunds can be created. There has to be field identification and labeling for public monitoring. The soil fertility management which is crucial aspect of organic farm management was not clear in the project area. Soil fertility management included mixed cropping, rotation, organic matter, external inputs, and micro nutrients. This was not done in the project area due to small holdings, lack of livestock on the farms, and problems of wild animals. Similarly, for pest and disease management, the Farmer Field School (FFS) concept was good but needed simplification, customization, and local resource persons and local inputs. On the other hand, the ICS was found to be good though there was confusion regarding its use, the procedure was lengthy, and there was translation problem. Transport and picking systems were also good though needed improvement for controlling contamination especially labeling of bags, packaging and labeling inks which contaminate.. The EU 2092/91 standards were followed for this organic certification which was in the name of Solidaridad, Netherlands, not growers or their groups as it pays for it, and for 2005 only. The criteria used was small holder farmers' group certification which had aspects like separation/storage, manuring, soil and fertilization, pest disease and weed control, starting material (seed), labeling and transport, administration, ICS and Eko- use of quality symbol (SKAL certification report, 2005).

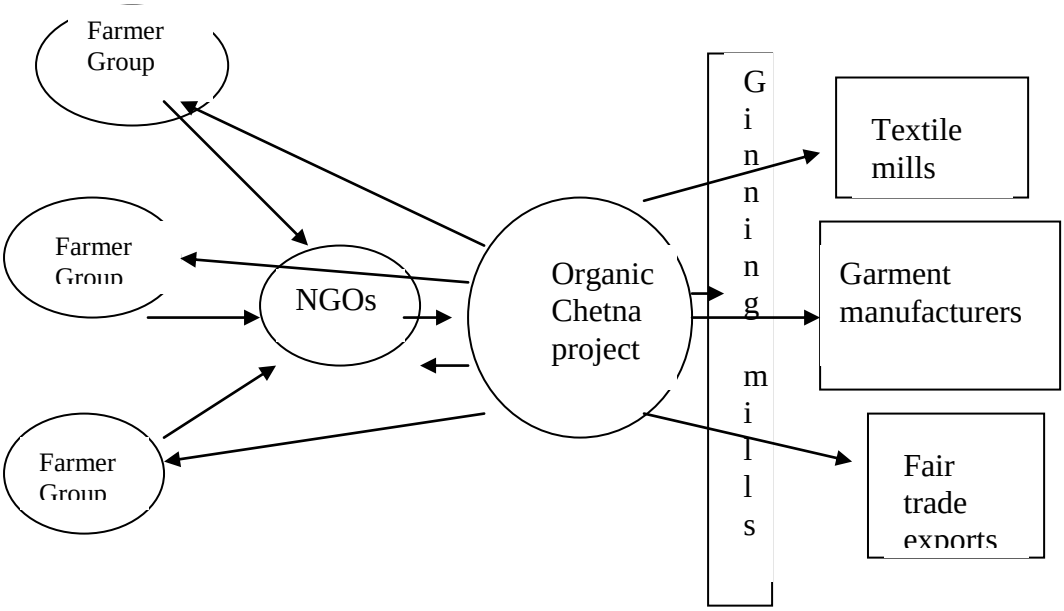
The certification aspects also include ecological and social standards for fair trade purposes and HACCP approach for process quality control from farm to gin including grower household level storage, common storage, and transport. Since the area is rain fed, the quality problems happen due to situations of drought which cause nutrient deficiency in plants. The solutions include irrigation, organic inputs, and cleaner picking.

Processing level Quality

The ginners (Rajlakshmi Mills, Calcutta) complained about the smaller volumes, shorter length of staples, ink being used for labeling and dirty trucks being used for transport of cotton. But, ginning quality is very important and a gin can make or mar the quality of the lint in terms of staple length. Contamination refers to foreign matter like gutkha packs, human and animal hair, grease etc. which can be not removed by machine. So, to reduce contamination, picking should be done with covered heads, and no eating should be done on farm and in cotton mandi or store. But, in Maharashra, the farmers gave Rs. 0.5 per kg. extra for cleaner picking of cotton to labour and found that contamination increased due to delay in sale of produce. Also, the payment to growers was delayed for months.

On the other hand, ginning mills are non-certified, deal in all varieties of cotton, and earn 3-5 % margin but they also suffer from contamination problem and cut throat competition. Since cotton ginning is a seasonal work, there is a problem of taking care of labour interest which is must for fair trade certification. The ginneries are dirty, use child labour, work conditions are poor and wages are unfair. So, outsourcing of ginning does not help meet social standards (SA 8000 stds.). Some of the projects in organic cotton are thinking of creating alternative job work for these workers like cleaning the gin in off season, whitewashing, compost making etc. Since standards are to be applied at farmer level, it is very difficult to achieve social and fair trade standards.

Appendix Fig: 5.4.1. Organic Chetna Supply chain



Appendix -5.4.1
Organic Cotton Programme India

ORGANIC FARM DIARY

Farmer Name : _____

Farmer ID : _____

Group Name & No. : _____

Village : _____

District : _____

12-2-417/34, 1st Floor,
'Mohan Nivas' Ushodaya Colony,
Gudimalkapur, Hyderabad – 500 028 (A.P.) India.
Telefax: +91-40-2351 1082 (O), +91-40-5515 6022 (Emer)
Websites: www.etc-india.org / www.solidaridad.nl

Farmer Photograph

SKAL Form 1
Ownership documents

ARE THE FOLLOWING DOCUMENTS INCLUDED?

	Yes/No
- Field map indicating organic and conventional plots and storage areas	☐
AND	
- Title deed / Patta **OR IN CASE NO PATTA IS AVAILABLE**	☐
- Minimum 3 yr lease agreement, **OR IN CASE LEASE IS NOT AVAILABLE**	☐
- Letter with permission from local Agriculture/ Forestry Dept. for land use next 5 years	☐

Details of Land Holding

Name of the Farmer _____

Data Collection Date __ / __ /_____

Total Land Holding in Acres: _____

Plot No.	Land Area	Organic?		Soil Type	Irrigated		Lease Details		Name of the Legal Owner	Remarks
		Yes	No		Yes	No	Leased In	Leased Out		

Details of Family Members

Name of the Farmer _____ Data Collection Date __/__/___

Name of the Member	Male ( )	Female ( )	Child	Age	Occupation	Land allocated? Yes/No	Plot No.	Observation / Remarks

Animal Husbandry Stock and Disease Control

Livestock Type	Breed	Age (years)	Quantity	Market Value	Disease	Date	Medicine Used	Observations / Remarks

SKAL Form 6
Crop Plans[1]

Crop	Variety	Plot No.	Size (Acre)	Planting Material & Quantity (Kg.)	Planting time (Day/ Month/ Year)	Spacing	Intercrop & Ratio	Harvest time (Day/ Month/ Year)	Estimated Yield (Quintals per Acre

Detailed information about Cotton Seed Only

Name of Variety/Hybrid:		
Company Name:		
Staple Length (mm):		
Fiber thickness (micronair):		
Seeds are treated with chemical: Yes/No; If Yes mention the name:		
Seeds are washed with 0.5% Sodium Chloride once: Yes/No Then washed with good quality water five times: Yes/No		
Seeds are treated with bio-fertilizers: Yes/No, If yes specify the quantity:		
Sl. No.	Bio-Fertilizer(s)	Qty. (gm.)
1.	Azospirillum	
2.	Azotobactor	
3.	Phosphobactaria	
4.		
5.		
Seeds are treated with anti-disease microbes: Yes/No: If yes, specify the quantity Trichoderma Viride-		
Name of the Variety/Hybrid:		
Company Name:		
Staple Length (mm):		
Fiber thickness (micronair)		
Seeds are treated with chemical: Yes/No: If yes mention the name:		

[1] For every field. If organic: start from year 2002.

Seeds are washed with 0.5% Sodium Chloride once: Yes/No Then washed with good quality water five times: Yes/No		
Seeds are treated with bio-fertilizers: yes/No: if Yes specify the quantity:		
Sl. No.	Bio-Fertilizer(s)	Qty. (gm.)
1.	Azospirillum	
2.	Azotobactor	
3.	Phosphobactaria	
4.		
5.		
Seeds are treated with anti-disease microbes: Yes/No: If yes, specify the quantity Trichoderma Viride-		

SKAL Form 7

Input Purchase and Stock record[2]

Date of Purchase/ old stock	Name of the product	Synthetic pesticide / herbicide / fertilizer?	Qty.	Value (Rs.)	Bill No.	Suppliers address	Product data or information received	Total Stock

[2] For all farmer operations. If Organic: start from year 2002.

Cotton operations SKAL Form 8, 9 & 10[3]

Plot No. _____ Size (acre) _____

Activity *I.* Land preparation	Date	Days after sowing	Qty.	Rate	Cost (Rs.)	Hired Labour (days)		Labour charges	Grand Total Cost (Rs.)	Remarks
A) Ploughings										
No. of primary ploughings										
No. of secondary ploughings										
B) Field Cleanings										
Total I.										
A) Watering at germination										
B) Irrigation										
First Irrigation										
Second										
Third										
Fourth										
Total II.										

[3] For every field. If organic: start from year 2002.

Cotton operations continued

Activity *III.* **Soil fertility management**	Date	Days after sowing	Qty.	Rate	Cost (Rs.)	Hired Labour (days)		Labour charges	Grand Total Cost (Rs.)	Remarks
A) Basal:										
FYM										
Sheep/goat manures										
Enriched FYM										
(at the time of showing)										
B) Top Dressing										
Enriched FYM										
Cattle Urine										
Poultry manure										
Others										
C) Fertigation										
With Panchkavya										
Other										
D) Micronutrients										
TOTAL III.										

Cotton operations continued

Activity **IV Sowing**	Date	Days after sowing	Qty.	Rate	Cost (Rs.)	Hired Labour (days)		Labour charges	Grand Total Cost (Rs.)	Remarks
A) Cotton										
Cotton										
Cotton										
Cotton										
Cotton gap filling										
B) Inter Crop										
C) **Border Crop**										
D) Trap Crops										
Castor										
Bhendi										
Marigold										
Sunflower										
Other										
E) Eco-Feast Crop										
Fenugreek										
Other										
Total IV.										

Cotton operations continued

Activity **V. Plant Protection**	Date	Days after sowing	Qty.	Rate	Cost (Rs.)	Hired Labour (days)		Labour charges	Grand Total Cost (Rs.)	Remarks
A) Measure taken:										
Micro pathogens:										
B) Disease Management:										
C) Plant Growth Regulators:										
Total V.										

Cotton operations continued

Activity **VI. Harvesting**	Date	Days after sowing	Qty.	Rate	Cost (Rs.)	Hired Labour (days)		Labour charges	Grand Total Cost (Rs.)	Remarks
A) Inter crop harvesting										
B) Cotton Pickings (including packing)										
First										
Second										
Third										
Fourth										
Fifth										
Sixth										
Seventh										
C) Cotton Grading and Cleaning										
Total VI.										

Cotton operations final sheet

Activity **VII. Post harvest handling**	Date	Qty.	Rate	Cost (Rs.)	Hired Labour (days)		Labour charges	Grand Total Cost (Rs.)	Remarks
A) Transport field to storage location									
First									
Second									
Third									
Fourth									
Fifth									
Sixth									
Seventh									
B) Ginning									
Transport storage location to Ginning mill									
Ginning cost									
Transport cotton seed to oil press									
Pressing cost									
Total VII.									
**********	***	***	***	***	**	**	*****	****	******
Total I.									
Total II.									
Total III.									
Total IV.									
Total V.									
Total VI.									
Total VII.									
GRAND TOTAL = I+II+III+IV+V+VI+VII									

Non cotton crop operations SKAL Form 8, 9 & 10[4]

Plot No. _____ Acreage _____ Crop ____

Activity	Date	Quantity	Rate	Cost (Rs.)	Labour charge	Grand Total Cost (Rs.)	Remarks

Non cotton crop operations SKAL Form 8, 9 & 10[5]

Plot No. _____ Acreage _____ Crop ____

Activity	Date	Quantity	Rate	Cost (Rs.)	Labour charge	Grand Total Cost (Rs.)	Remarks

Cost Benefit ratio

Cost _____ Income _____

Heading	**Expenditure**		**Heading**	**Income**	
Land preparation			Cotton lint sales (> 27 mm fibre)		
Irrigation			Cotton lint sales (< 27 mm fibre)		
Soil Fertility management			Cotton Seed Sales		
Sowing			Other Crops		
Weeding					
Plant protection					
Harvesting					
Post-harvest					
Interest paid on capital					
Grand Total			**Grand Total**		

[4] For every field. If Organic: start from year 2002

[5] For every field. If Organic: start from year 2002.

SKAL Form 11
Storage Areas

Storage areas on the farm for storing inputs and products

Store No.	Only organic products / inputs? Yes / No	Input/Product stores/ to be stored	Capacity of the store (square meter)

SKAL Form 12
Harvest and Yield Records

For every field. If Organic: Start from year 2002

Date of Harvest	Particulars of the product	Quantity	Plot No.	Lot No.	Opening Stock (kg.)	Total Stock (kg.)

SKAL Form 13

Sales / Dispatch record

Date	Particulars of the product	Quantity sold or dispatched	Lot No.	Price	Income (Rs)	Balance in Stock	Mode of Dispatch	Consignee
	Lint > 27 mm							
	Lint < 27 mm							
	Cotton Seed							

	Other Crops							
Grand Total								

SKAL Form 14

Labelling and Packaging

For Individual Product (This label should be used on products during storage and transportation.

Name and Address of the producer	Details of the product		Lot No.	Package details	
	Product	Method of production		Materials used	Units/Bulk

Appendix -5.4.2

Solidaridad-ETC Organic Cotton Programme in India –Organic Cotton Storage Register

Farmer Name	Farmer Code	Certification status	No. Bag / total bags (1/5.2/5,.)	Variety	Picking Date (week)	Weight (Kg.)	Moisture (%)	Signature Farmer	Signature Field Officer	Signature Group Representative

NOTE: - Add summation of total no. bags and weight for each farmer’s delivery.

Chapter 6

Organic Basmati Supply Chains in India- Organisation and Issues

Introduction

In the past six years, India has emerged as one of the world's largest producers of rice accounting for 20% of global rice exports in which basmati rice is the major contributor (Chikkamath et al, 2005). Basmati rice, a fine type of rice grown only in northern India, exports were of the order of 849 lakh tonnes valued at Rs. 2154 crore in 2000-01 which rose to 11.61 lakh tonnes valued at Rs. 3030 crore in 2005-06. The Indian basmati accounts for nearly 40% of the total UK rice market. Almost 80% of the basmati production in India is exported. Though in quantity the basmati rice exports (11.61 lakh tones) is not even one third of the non-basmati exports (39.05 lakh tones), in value, they are as high as $3/4^{th}$ of the value of the non-basmati rice exports. But, non-basmati rice exports grew even faster during the last five years from just 6.82 lakh tonnes valued at Rs. 777 crore in 2000-01 to 39.05 lakh tonnes valued at Rs. 4144.03 crore in 2005-06 (Damodaran, 2006). Basmati prices are subject to speculation and determined by intl. market prices.

Archaeologists excavating in India discovered rice, which they were convinced, could be dated to 4530BC. However, the first recorded mention originates from China in 2800 BC. Nevertheless it is still debatable on scientific evidence whether China, India or Thailand is home of the rice plant (indeed it may have been native to all). Rice is linked to fertility and for this reason the custom of throwing rice at newly wedded couples exists. In India, rice is always the first food offered by a new bride to her husband, to ensure fertility in the marriage, and children are given rice as their first solid food. Basmati rice is grown only in the Indian sub continent, in the foothills of the Himalayas. Basmati responds well to the climatic conditions of this area. The amount of water, the quality of the soil, the amount of daylight and the gentle winds that are characteristic of this region of Asia all combine to produce perfect conditions for Basmati rice to thrive. India being the largest producer and exporter of basmati rice commands premium over its traditional rivals in terms of prices and quality. The total rice market in the country is estimated to be worth around Rs 1,00,000 crore of which only 10% of the rice is branded. The branded rice sales have taken off in recent years and have been growing at around 15% in the domestic market compared to 5% for unbranded rice. The branded rice sales growth is an impressive 25% in the international market as compared to stagnant sales of unbranded rice. Added to this, of the Rs 3500 crore worth of basmati rice produced, only around Rs. 500 crore worth is sold in branded form.

Indian exporters have heavily invested in promoting their brands which focus on Indian long grain aromatic rice varieties as unrivalled choice for buyers. Bamsati rice has been one of the exported commodities from the northern Indian states of Haryana, Punjab and Uttaranchal for quite some time now. Exporters and their agents have made significant economic gains from this export boom in rice. Many of the basmati firms like KRBL, LT, and Satnam Overseas have recently renamed themselves as KRBL limited, LT overseas and Kohinoor Foods Limited respectively in order to give new corporate identity to their brands in national and international markets as their brands are better known than the companies themselves. In fact, LT overseas has already registered a subsidiary called Daawat Foods Pvt. Ltd. based on it brand name Daawat (*The Hindu Business Line*, August 05, 2006).

The major players in Haryana in organic basmati paddy procurement include Agrocel, Picric, Sunstar LT Overseas Ltd. and Sutlej Organics. Most of them are traditionally into conventional basmati rice including others like KRBL, undertake contract farming and are focused on export markets. But, there are issues of governance in this commodity chain from the perspective of primary producers which have been neglected by policy. For example, there is no MSP for basmati rice. Because Basmati is out of the purview of the MSP, its market operation is quite flexible and favourable for the processors and exporters. Also, being an export crop, it enjoys a well established high value market which in turn has created a lot of room for the exporters. Thus, it has been one of the more penetrated commodity among organic crops and has not seen any defaults in contracting. But, the farmers are finding it difficult to meet the exporter and importer demands of quality due to rising costs where the risk of production is entirely of the producer. There is also a problem of declining yields due to intensive use of chemical inputs. They have little power to influence the chains. The important issues in basmati rice commodity chain are the exclusion and inclusion of primary producers by the buyers who may be exporters or importers or supermarkets, product and production standards and timelines for produce delivery. The farmers and workers are the weakest links in the chain. They are not ensured of their sustainable incomes in these chains which function in the absence of state and the presence of increasingly globalised markets (Plahe, 2005). In this context, this case study looks at the organic basmati supply chains in the region.

Major findings from case studies

As the table 6.1 shows that the companies work with large and medium growers and only the govt. project (UOCB) works with small growers. The certification, being paid for my agencies, makes

them own it, which binds the farmers to them. This is a governance issue and that of farmer interest protection. Further, the projects are export market driven which are governed by international standards and procedures. The projects though started in individual states are expanding now to larger areas of basmati production in the north of India. The traditionally entrenched basmati players have been quick to use their own marketing and processing infrastructure but new entrants are managing by outsourcing these jobs. The organic basmati is also the crop where a facilitator is being used by at least one company to manage its procurement base.

Contract Farming and Procurement of produce

The contracts with individual growers are written (See Appendix 2 for contract) and valid only after certification. Most of the agencies directly procure the produce from the farmers (Figure 6.1). They provide either on their own or through a facilitator (Figure 6.2). various organic inputs as well. But, the contracts are highly biased against the growers (see contract agreements in case studies in Appendices).

Certification

The certification cost was borne by the contracting companies in all cases. The ICS is documented by the staff entirely Due to certification problems, some farmers have been also excluded from the groups. Though due to group certification, the cost of certification is not very high anymore, but companies and agencies retain control of certification by having the certification in their own name as project and not in individual growers' or grower groups' names. This is another governance issue in organic supply chains from the perspective of growers and agricultural and rural development.

Due to the lack of trust and poaching besides the lower price offered by a company to organic basmati growers in Uttaranchal, there has been problems of switching over to another company and loss of certification as the certification was a group certification and with the company. APEDA has refused to let the certification agency continue the certification of the same group of farmers under the new company as NPOP rules do not permit it. Now, the farmers have to wait for another year before the ICS could be recognized (Srinivasan, 2006).

Table 6.1: A comparative picture of the organic basmati rice projects in 2005 (source: field studies)

Company/project> Parameter	**Agrocel**	**Satluj**	**UOCB**	**Picric**	**Sunstar**
Area (states)	Haryana	Punjab, Haryana, U.P.and Uttaranchal	Uttaranchal	Haryana	Haryana, U.P., and Uttaranchal
No. of farmers	190	43	441	70	280
Organic basmati area (acres)	814	2200	500	600	1200
Certified area (acres)	All	All	All	all	All
No. of Certified farmers	All	All	All	all	All
Average size of holding (acres)	31.94	51	1.25	30	n.a.
Pricing formula	Market price of conventional basmati plus 25% premium	Market price of conventional basmati plus 35% premium	Market price of conventional basmati plus 25% premium	Market price of conventional basmati plus 25% premium	Market price of conventional basmati plus 25% premium
Nature of Organisation of growers	Contract growers as a group	Contract growers	Contract growers	Contract growers through facilitator (Agrocel)	Contract growers
Certification with	Company	Company	Project	company	Company
Processing infrastructure	outsourced	Outsourced	outsourced	Own mills	Own mills
Major markets	export (fair trade channel)	Export	export	export	Export (fair trade channel)

Price and Quality issue

Due to quality variations at the farmer level, pricing becomes a problem as farmers expect same price for all types of produce and there is no MSP for basmati paddy in India. Surprisingly, though there are very lucrative prices in export market for organic basmati paddy, the companies offer prices to growers which are based on open market price of conventional produce in the local market at the time of harvest. This is quite contrary to the spirit of contracting and the organic farming as farmers produce for a different market but still get their remuneration based on local conventional produce market. It is well known that open market prices in India fluctuate widely and thus even a 25% higher price for organic may not mean really remunerative price for the grower.

There are also quality problems like discoloring. But, there are no defaults by the farmers as there is no MSP to look for or compare with. The market rate takes care of quality incentives as better variety gets better rates and the highest rate of the day for each variety is taken for payment to the farmer. There is no problem of moisture due to manual harvesting of crop. All harvesting is done manually due to quality reasons both in conventional basmati as well as organic.

Processing of Organic Basmati

Paddy processing companies require significantly high inventory levels, as basmati rice has to be aged for 12-18 months before it can be processed. Therefore, all companies and agencies have to provide for sufficient storage for the procured produce. The recovery rate of rice from paddy is 65%. The paddy is generally stored at the hired or owned mills and milled over 5- 6 months. For organic processing, the mills have to be organic certified.

Marketing of organic basmati rice

Most of the organic basmati is meant for export market and major markets are in the EU like Germany, Switzerland, and France. It is sold to importers in bulk with no brand names generally. The processed rice is mostly packed in 20 kg packs with company tag, batch No., packaging date, and net weight besides the type of rice. Though most of the companies sell through conventional wholesale channels (importers and exporters), Agrocel uses the conventional basmati fair trade route for its organic rice with no organic label which is sold to wholesale importers in U.K.

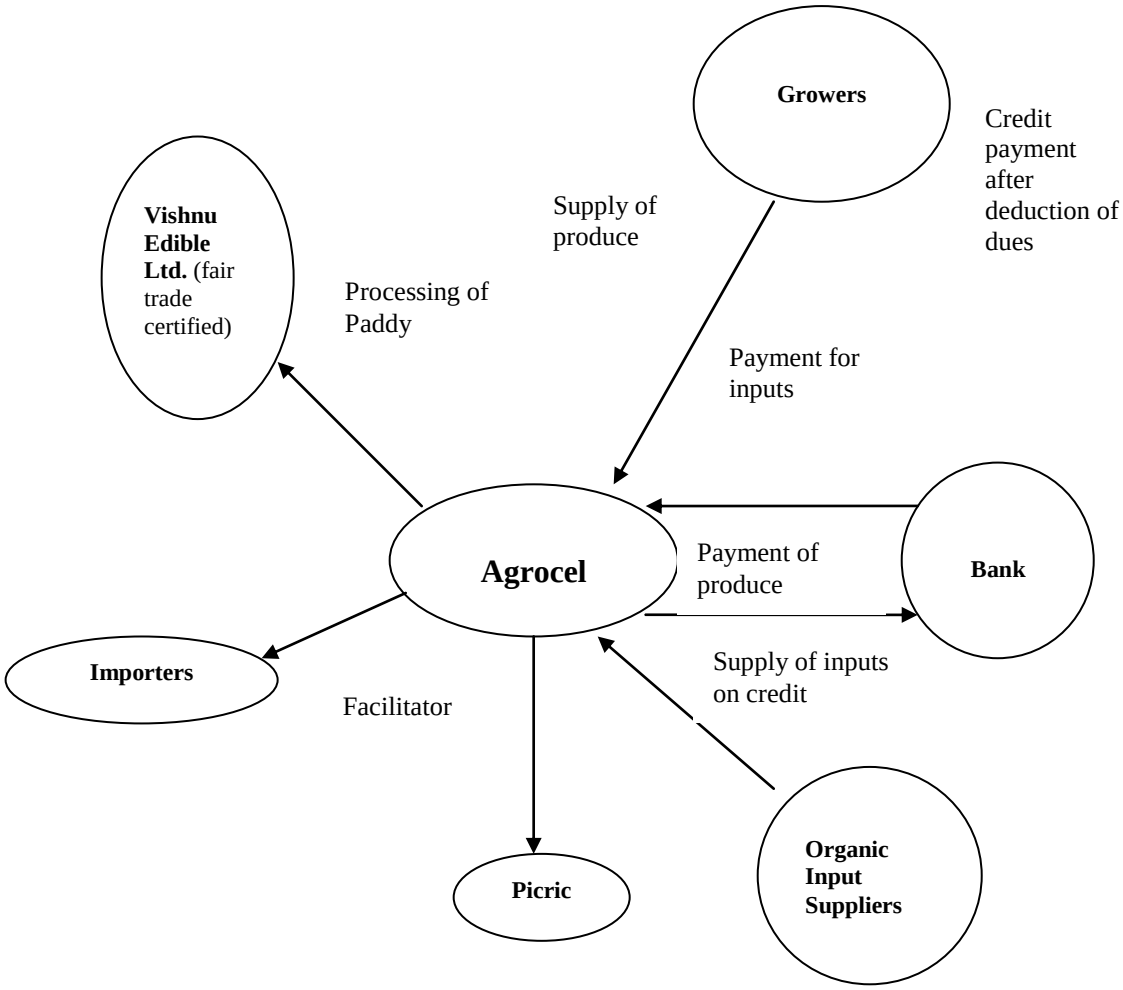
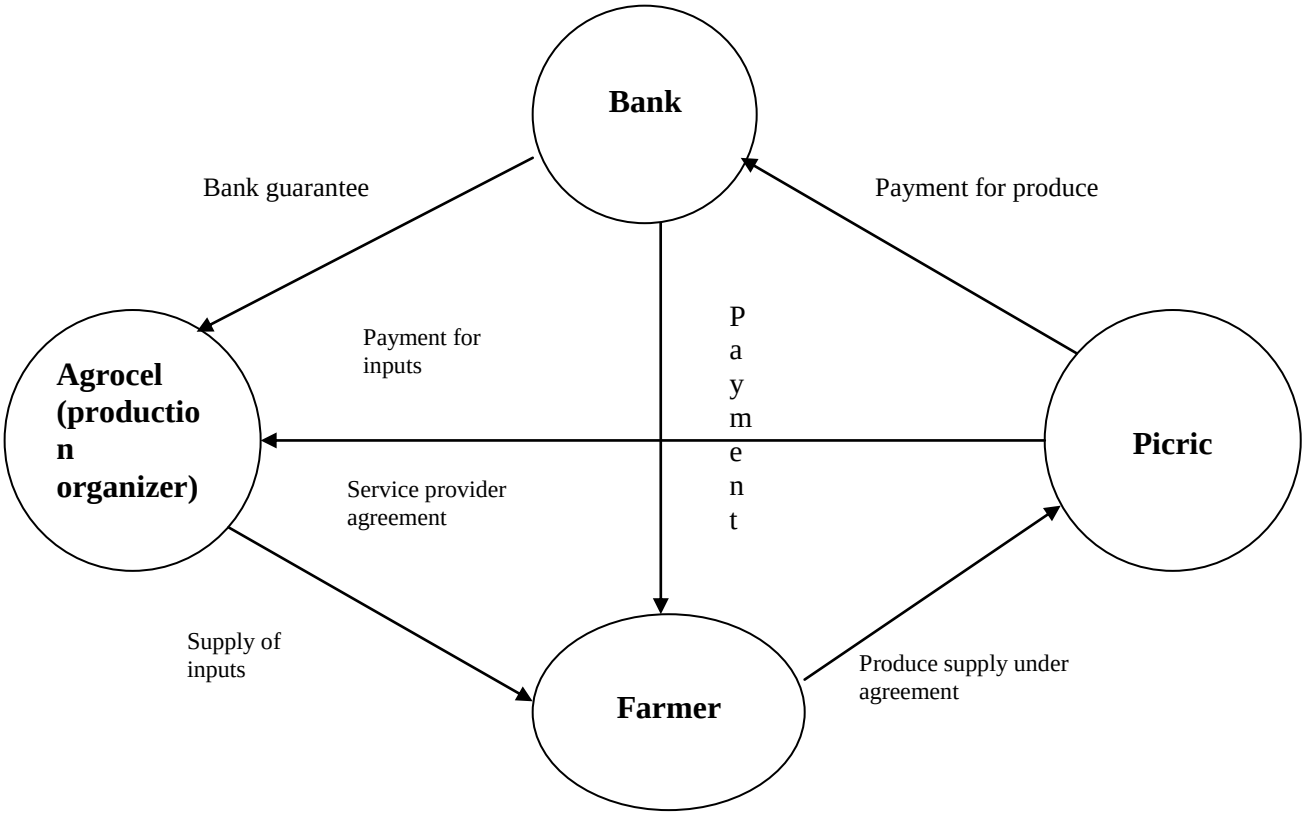


Fig. 6.1 Agrocel Supply Chain for Organic Basmati Paddy and Rice

Fig. 6.2: Picric Organic Basmati Supply chain



Appendix 6.1.: Case Study 1: Agrocel, Kaithal

Introduction

The Kaithal operations in organic Basmati by Agrocel Industries started in 1998 and certified organic Basmati production had begun with 35 farmers and 277 acres in 2001. Today, there are a total of 260 farmers including 70 farmers with 600 acres for Piciric Ltd., another rice exporting company based in Delhi with a plant in Sonepat (see Box 'Picric Ltd.'). Picric farmers are in 15 villages and Agrocel farmers in 30 villages in terms of stead of farmers and all are within a radius of 25 kms. from Kaithal. The company has been working for Picric since 2000. Company has been in Kaithal since 1995 in ICM promotion and input sales. Of the total, 160 are certified organic and others in-conversion farmers. These farmers are spread over a total of 30 villages with 27 in Kaithal and 3 in Kurukshetra district. Besides, there are 20 farmers in U.P. and Uttaranchal also which are looked after by the Kaithal project. The area is fully irrigated with canal and tubewells. Agrocel charges Rs. 500/- per acre from Picric as service charge for co-ordinating contract organic basmati production with farmers (Fig.1). The Agrocel direct contract farmers number 190 with 814 acres. Only 212 acres are under conversion with new and old farmers. Most of the farmers have put only a part of their farmland under organic which is certified and rest of the acres is being put to organic in stages. The land holding of the organic growers ranges from 5 to 60 acres. The acreage under organic crop varies from 2 to 30 acres with average being 9 acres.

Table 1: Distribution of Farmers by category, average land holding, and area under contract

Category	No. of farmers	Total land	Avg. land holding	Under Contract (acres)	Non contract	Land under contract as % of total land	Avg. land under cont.
Med.	3 (8.82)	23	7.7	7.5 (2.41)	15.5 (1.99)	32.6	2.5
Large	13 (38.23)	199	15.3	68 (21.90)	131 (16.89)	34.2	5.23
V. Large	18 (52.95)	864	48	235 (75.69)	629 (81.12)	27.2	13.05
Total	34 (100)	1086	31.94	310.5 (100.0)	775.5 (100)	28.6	9.13

Note: Medium =5 to 10 acre, Large= 10 to 25 and Very Large > 25 acres
Figures in parenthesis indicate percentages

All the 34 farmers interviewed were certified organic. Table 1 reveals that among the interviewed 34 farmers, 8.82% were medium farmers, 38.23% large and 52.95% were very large farmers. The average land holding of the medium, large and for very large farmers was 7.7, 15.3 and 48 acres respectively and the average land holding under contract was 2.5, 5.23 and 13.05 acres for the same category. The percentage area of total land under contract farming with medium, large, and very large farmers was 32.6%, 34.2% and 27.2% respectively. This is in a context where the average size of operational land holding in Haryana is only 2.13 hectares or about 5.25 acres (GoP, 2004). The organic acreage varied from a low of 2 acres (22% of total land of the grower i.e. 9 acres) to 30 acres (75% of the total land of the grower i.e. 40 acres. But, as percentage of total land, organic acreage varied from a low of 7% to as high as 100%. The correlation coefficient between farm size and organic acreage was 0.52. The following table shows the distribution of farm holdings and the acreage under organic production.

Table: 1.1: Farm Size and Organic Operations size of growers

Farm size(acres)	Average acreage under organic farming
0 - 10	4.06
11 - 20	5.20
21 - 30	10.50
31 - 40	14.67
> 40	13.25

This is further corroborated by the following table which shows classification of the farm size in class intervals of 10 acres. It is found that that the average acreage under organic farming showed a positive relation with the farm size.

Table 1.2: Distribution of growers by proportion of land under organic crops

Percentage land under organic cultivation	Average acreage under organic farming
0 - 20	7.50
21 – 40	7.47
41 – 60	13.00
> 61	16.50

Contract Farming and Procurement of produce

The contract with individual growers are written (See Appendix 2 for contract) and for five years after certification. Agrocel directly procures the produce from the farmers (Figure 6.1). The company has total control over the contract i.e.

1. it procures the output
2. it supplies the inputs (e.g. Biofertilizers, Biopesticides, etc.)
3. it guides the farmers (provides technical help).

The certification cost was borne by the contracting company. The farmer has to first apply for organic production for the company and then sign an agreement (Appendix 1&2). For fair trade, a group of organic growers called Agrocel pure and fair rice growers' association with 70 members across 12 villages has been set up and is being registered under the Societies Act this year. But, a perusal of the contract agreement shows that there is very little commitment from the company side e.g. no mention of penalties in case the company fails to buy the produce or provides poor technical assistance. Agrocel procures paddy both for itself and for Picric. The company pays 25% premium over market price (Rs. 1500/qtl. generally) of conventional basmati paddy in Kaithal on the day of the sale to the farmers which was only 20% until last year. However the premium paid for the in-conversion crop is only 10% and the rest 15% is kept until the farm is certified organic. The organic basmati yield is one to two quintals lower than the conventional crop yield especially during conversion period. The payments are made within a week by cheque and only small amounts are paid by cash. The company also pays 5% premium on organic wheat crop and 10% on mustard which are not procured by the company and sold in the open market by the farmers. But, this is an important issue as wheat is dominant crop in this area and not a very profitable crop for the farmer.

The Agrocel pays 4% Mandi tax which includes 2% Rural Development cess and 2% market fee. It does not have to pay another 2% commission for purchase as it is licensed to purchase from farmers. Further, there is 0.08% auction fee which makes the procurement cost of the order of 6.58% for the company as some farmers sell through traders. The H and J forms are filled at the market yard and signed by the Mandi officer of APMC for payment of mandi taxes.

Input Supply

The company provides inputs like rock phosphate, neem cake, enzymes, trycoderma and brosilium culture, some of which are supplied by the group company Excel Industries and others procured from local sources and other companies like IPL i.e Indian Paneccia Ltd. which supplies Nitrogen Becteria and Margo which supplies Azatobacter. All these inputs are SKAL certified. Company does not charge any interest on input sold on credit. Only bio-compost is sourced by farmers on their own from a local cooperative society which promotes vermiculture and also supplies cow urine and herbal abstracts for bio-pesticide applications, in unbranded bottles. The seeds are procured from Picric at the rate of 5 kg. per acre as they have their own organic seed production under contract farming. But organic weedicides are not available which causes a major problem in organic production. In fact, small farmers make their own inputs while large farmers buy them from the market. There is no subsidy on inputs by the company. The company has made arrangements

with ICICI bank since last year under which a loan of Rs.10,000/- per acre in cash and kind is given under the guarantee of the company. All the inputs are on credit and the recoveries are made from payment for the produce. The seed cost is Rs. 60/- per kg. and an acre needs 5 kg. of seed. The cost of production and returns for organic basmati paddy are given in table 6.1.1 and 6.1.2. This can be compared with the cost and returns as given by the company (table 6.1.3).

ICS and Certification

The ICS followed (Appendix 4) is documented by the staff entirely with three supervisors for 16 villages and 260 farmers. The certification cost is borne by the two companies (PICRIC and Agrocel) for their respective farmers. Company uses SGS certification for product quality purposes and SKAL for organic process certification. Due to certification problems, some farmers have been also excluded from the groups.

Storage and Processing

Paddy processing companies require significantly high inventory levels, as basmati rice has to be aged for 12-18 months before it can be processed. In case of Agrocel, there is no storage at the farmer level as they bring it directly to the market yard after harvesting. Agrocel has a market yard allocated for the organic produce in front of its office in the local APMC market yard.

The recovery rate of paddy is 65%. The paddy is stored at the mill and milled over 5 to 6 months. The company pays Re. 1/- per kg. of paddy as milling charge including packing labour. The rice mill - Vishnu Eatable is not organic certified as Agrocel sells organic rice as fair trade rice only, not organic.

The processed rice is mostly packed in 20 kg packs and has a plastic tag with details of company name, batch No., packaging date and net weight besides the type of rice. Organic rice is sold as conventional fair trade basmati with no organic label to wholesale importers in U.K.

Larger Effects of Organic production

In this area, every aspect of organic farming was brought in by the company and farmers up to 10 acres are considered as small by the locals and the company. There is not much impact of organic project on local organizations like the PACS as only a few farmers have come under organic that too only partly. Though the organic project has not affected the land lease system, it has increased the workload on women as small farmers make most of the organic inputs at home. More farmers

are coming under the project due to demonstration effect as there are at least a few farmers in each village who act as demonstrators. The local company staff feel that the govt. could give cash subsidy to organic growers and provide marketing support for high value crops like vegetables to promote organic farming. There is no child labour practice in basmati and wheat crops in the area as theses crops do not require child labour. The networked agencies include Picric for organic paddy seed, a local co-operative society for organic inputs, bank (ICICI) for contract grower credit, and many input companies for input supply.

Table 2 reveals that out of 34 certified farmers studied, 5.85% were in the 3rd year, 18% in 4th year, 38% in 5th year, 21% in 6th year and 18% in 7th year of the contract. More of the very large and large growers were into long relationships with the company as they were the first ones to align with the company. So far as irrigation is concerned, 85.3% of the farmers used tube wells alone for irrigation and 15% both canal and tube wells. Notably, all the three medium farmers were using tubewells only.

Table 2: Duration of Contracting with the company

		Year of contract				
		3rd	**4th**	**5th**	**6th**	**7th**
Med.	3 (8.82)	0	2	0	1	0
Large	13 (38.23)	1	2	5	4	1
V. Large	18 (52.95)	1	2	8	2	5
Total	34 (100)	2 (5.85)	6 (18)	13 (38)	7 (21)	6 (18)

(Figures in parenthesis indicate percentages)

Table 3: Area under contract farming in different crops (acres)

		Kharif (paddy)			Rabi
		Basmati	**Pusa**	**Basmati11**	**Wheat**
Med.	3 (8.82)	7.5	0	0	7.5
Large	13 (38.23)	60	8	0	68
V. Large	18 (52.95)	162	53	20	235
Total	34 (100)	229.5 (73.9)	61 (19.66)	20 (6.44)	310.5 (100)

(Figures in parenthesis indicate percentages)

Table 3 reveals that the main kharif crop sown is Basmati rice (74%) which attracts lower pest attack. It was observed that farmers adjust the cropping pattern according to the prevalent market rates of the crops. In fact, it is the known basmati belt of India in Haryana and supplying source of most of the basmati rice. A look at the Table 4 reveals that Basmati rice is once again the predominant Kharif crop sown on the non-contracted farms. Other major crops include PR-105, Pusa, vegetables and fodder.

Table 5 shows that wheat is the major rabi crop which accounts for 87.7% of the total area under cultivation in the non-contract category. Vegetables are sown on 12% and fodder on a marginal area covering 0.3% of the total cultivated land. Table 6 reveals that all of the farmers interviewed described land improvement as the major reason for organic farming. About 70% valued price premium for organic produce, 29.4% low input use, 53% own consumption, , 17.6% regular monitoring, 11.8% organic husk, 8.8% assured market 14.7% self esteem and 38.2% lower pest attack. Only about 1/4th of the growers reported some instance of crop failure (table 7). About 35.3% of the farmers were of the view that market price is higher than the company's price while for 64.7% found both the rates equal (table 8). Most of the farmers (82%) received the contract information from the extension network of the company while for 17.7%, peer group was the source of the information (table 9). Table 10 reveals the fact that about 85% of the farmers entered into the contract because of premium considerations. 32.3% did so for the sake of interest free inputs on credit. One time payment for 20.6%, lower input cost for 41.2%, regular monitoring for 32.3% and ensured land fertility for 14.7% emerged as the major reason for contract farming.

Table 4: Area under Kharif crop on non-contract land (in acres)

	Crop							
Farmer category	No of farmers	Basmati*	PR-105*	Sharbati *	Fodder	Hybrid *	Vegetable	Pusa*
Med.	3 (8.82)	13.5	2	0	0	0	0	0
Large	13 (38.23)	112	2	4	10	0	0	3
V. Large	18 (52.95)	111	67	241	109	50	40	11
Total	34 (100)	236.5 (30.6)	245 (31.6)	71 (9.1)	14 (1.8)	50 (6.4)	40 (5.1)	119 (15.4)

Note: * all these are varieties of paddy; Figures in parenthesis are percentages in total acreage.

Table 5: Area under Rabi crop on non-contract land (in acres)

Category	No. of farmers	Wheat	Vegetables	Fodder
Med.	3 (8.82)	15.5	0	0
Large	13 (38.23)	131	0	0
V. Large	18 (52.95)	534	93	2
Total	34 (100)	680.5 (87.7)	93 (12)	2 (0.3)

(Figures in parenthesis indicate percentages)

Table 6: Distribution of growers by reasons for adopting organic farming

Category	No. of farmers	Land imp.	Prem	Low input	Own cons.	Assured mkt.	Regular Monit	Org husk	Self est.	Low disease and pest attack
Med.	3 (8.82)	3	3	0	2	0	0	0	0	0
Large	13 (38.23)	13	12	2	3	1	4	2	0	5
V. Large	18 (52.95)	18	9	8	13	2	2	2	5	8
Total	34 (100)	34 (100)	24 (70.6)	10 (29.4)	18(53)	3 (8.8)	6(17.6)	4 (11.8)	5 (14.7)	13 (38.2)

Note: figures in parentheses are percentages of total farmers and responses are multiple.

Another study of 60 organic paddy growers in Kaithal and Sonepat districts also found that the contract price was higher that the local market price of basmati paddy with share of producer in consumer rupee being higher in this organic channel as compared to that in the conventional paddy channel though the marketing margin was same in both the channels. The farmers reported problems like difficulty in meeting quality requirements, lack of independent testing and certification facilities in the producing area, lack of government regulation on quality of inputs and their prices, poor service provision b the contracting firms, lower prices, lack of market information, and discount in the name of quality, though they agreed that contract organic production increased income and reduced marketing risk (Chikkamath et al, 2005). Table 11 reveals that 85.3% of the farmers would continue to work under contract. Table 12 reveals that the major reason for continuing the contract is land improvement, premium, and better quality of produce. All the farmers were of the view that increased incomes and better soil management was ensured under contract organic farming. Further, 23.5% viewed the better faming skills as the major benefit of contract farming (table 13).

Table 7: Distribution of growers by any instance of crop failure

Category	No. of farmers	Yes	No
Med.	3 (8.82)	1	2
Large	13 (38.23)	2	11
V. Large	18 (52.95)	6	12
Total	34 (100)	9 (26.4)	25 (73.5)

Note: Figures in parenthesis indicate percentages of total farmers.

Table 8: Distribution of growers by their perception of market price v/s contract price

Category	No. of farmers	Higher	Equal
Med.	3 (8.82)	1	2
Large	13 (38.23)	2	11
V. Large	18 (52.95)	9	9
Total	34 (100)	12 (35.3)	22 (64.7)

(Figures in parenthesis indicate percentages)

Table 9: Distribution of growers by source of contract information

Category	No. of farmers	Extension	Peer Group
Med.	3 (8.82)	2	1
Large	13 (38.23)	12	1
V. Large	18 (52.95)	14	4
Total	34 (100)	28 (82.3)	6 (17.7)

(Figures in parenthesis indicate percentages)

Table 10: Distribution of growers by reasons for the contract

Category	No. of farmers	Prem.	Inp on credit.	One time payment	Low Inp. cost	Reg. monitor	Fert. Ensured	Assured mkt.
Med.	3 (8.82)	3	2	2	0	1	2	1
Large	13 (38.23)	12	3	3	7	2	7	1
V. Large	18 (52.95)	14	6	2	7	8	7	3
Total	34 (100)	29 (85.3)	11 (32.3)	7 (20.6)	14 (41.2)	11 (32.3)	16 (47.1)	5 (14.7)

(Figures in parenthesis indicate percentages)

Table 11: Distribution of growers by Intention to Continue Contact

Category	No. of farmers	Yes	No
Med.	3 (8.82)	3 (100)	0
Large	13 (38.23)	13 (100)	0
V. Large	18 (52.95)	13 (72.2)	5 (27.8)
Total	34 (100)	29 (85.3)	5

(Figures in parenthesis indicate percentages)

Table 12: Distribution of growers by reasons for continuing the contract

Category	No. of farmers	Land imp.	Premium	Better mng.	Better quality of produce
Med.	3 (8.82)	2	1	0	0
Large	13 (38.23)	8	6	1	0
V. Large	18 (52.95)	11	2	0	2
Total	34 (100)	21 (61.7)	9 (26.4)	1 (2.9)	2 (5.9)

(Figures in parenthesis indicate percentages)

Table 13: Distribution of growers by major benefits of contracting farming

Category	No. of farmers	Better farming	Reliable income	Better income	Better soil mng.
Med.	3 (8.82)	0	1	3	3
Large	13 (38.23)	3	1	13	13
V. Large	18 (52.95)	5	1	18	18
Total	34 (100)	8 (23.5)	3 (8.8)	34 (100)	34 (100)

(Figures in parenthesis indicate percentages)

Table 14 reveals various problems of contract farming. 32.3% of the farmers told that their payments got delayed, 32.3% complained that company gives them the lower price, 17.6% told that only single crop was purchased, 2.9% were not convinced with the grading system. Other problems included payments on cheque, poor inputs, higher input costs and delayed payments. Some farmers were aware of the activities carried out by organizations other than Agrocel. These included Sun Star, Kaithal Pragatisheel Club, Shiv Shakti, Adarsh and some local artias. The study in this region reveals that contract farming did not have any specific relationship with the supply of labor and wage rates. Only one farmer was aware about the concept of fair trade.

Table 14: Distribution of growers by problems of contract farming

Category	No. of farmers	Del.Pay	Low price	Single crop pur.	No transpc. In grdng	Del. Proc.	Payments on cheque	Poor inputs	High input costs	Bonus delayed
Med.	3 (8.82)	0	0	0	0	1	0	0	0	0
Large	13 (38.23)	2	1	4	0	0	1	0	0	0
V. Large	18 (52.95)	9	10	2	1	2	2	1	1	1
Total	34 (100)	11 32.3)	11 32.3)	6 17.6)	1 (2.9)	3 (8.8)	3 (8.8)	1 (2.9)	1 (2.9)	1 (2.9)

(Figures in parenthesis indicate percentages)

Table 15 reveals that 14.7% of the farmers felt that more visits by field officers can contribute to the effectiveness of the contract. 50% of the farmers asked for more premium, 29.4% desired timely payments. Other factors that could contribute to effectiveness of the contract include timely procurement, soil and water testing, crop insurance, improved inputs, advance payments, prior rate information, more crops coverage, direct purchase, collective payment of bonus & income and transparency in grading system.

Table 15: Suggestions for making contract system more effective

Category	No. of farmers	More vis	More pre	Tmy pay	More Ex	Soil test	Tmy Prc	Crop ins	Imp. Inp	Adv Pay	Prior inf	More crp	Dir Pur	Bon+Pay	More trn.
Med	3 (8.82)	0	3	1	0	0	1	2	0	0	0	0	0	0	0
Large	13 (38.23)	4	8	2	0	0	0	5	4	2	3	5	0	0	0
V. Large	18 (52.95)	1	6	7	2	1	3	5	6	3	0	6	1	1	1
Total	34 (100)	5 (14.7)	17 (50)	10 (29.4)	2 (5.8)	1 (2.9)	4 (11.7)	12 (35.3)	10 (29.4)	5 (14.7)	3 (8.8)	11 (32.3)	1 (2.9)	1 (2.9)	1 (2.9)

(Figures in parenthesis indicate percentages)

Appendix Table 6.1.1: Operational costs and returns in Organic Farming (A)

Nursery Bed Preparation for I acre			
Activities/Input used	Unit/acre	Rate/Unit	Total amount(Rs)
Ploughing			835
Puddling			755
Seed rate	5Kg	Rs38*5=190	190**
FYM	10 tones(3 Trolley)	1 Trolley=Rs300	900
Biofertilizers			
Cellrich	4bag	Rs160/bag	640
Herbozyme	1bag(8kg)	Rs160/bag	160
		Total for 50 acres*	3480
		For one acre	3480/50=69.6
Therefore the expenses of preparing seedling for 1 acres =190**+69.6 =260			
Average amount for 1 acre Rs260			
*one acres nursery preparation meets requirement of 50 acres of land **Cost of 5 Kg of seed for transplanting seedlings for 1 acre			

Appendix Table 6.1.1: Operational costs and returns in Organic Farming (B)

Activities/Input used	Unit/acre	Rate/Unit	Total amount(Rs)
Land preparation			835
Puddling			755
FYM	10Tonnes(3 Trolley)	I Trolley=Rs300	900
Cost of nursery			260
Transplanting		Rs 500/Acre	500
Biofertilizers			
Rock phosphate	1 Bag(50kg	Rs350/bag(50Kg)	350
Neem cake	25kg	50kg=Rs300	150
Cellrich(OGP)	1 Bag	160	160
Herbozyme	1Bag(8kg)* 2 times	160	320
Biopesticides			
Neem oil	400ml*2times	Rs 400/ 1litre	320
Pseudocell	700gm/acre*2times	Rs 320/700gm	640
Irrigation	15HP/10acre/Month@700 per month	Rs700*4 months=2800 for 10 acres	280
Maintainence	Rs18		18
Weedicides	0		
Weeding (manual)	2 times		700
Harvesting			1250
Transporting	12Q	Rs 15/Q	180
Cleaning	12 Q	Rs 5/Q	60
Total expenses			7678
Yield	12 Q	Rs1400/Q	16800
Premium	25%		4200
Total earnings			21000
Net income			13322

Appendix Table 6.1.2: Operational costs qnd returns in conventional farming (A)

Nursery Bed Preparation for 1 acre			
Activities/Input used	Unit/Acre	Rate/Unit	Total Amount(Rs.)
Ploughing			835
Puddling			755
Seed rate	5 kg	38*5	190
Seed treatment			10
FYM	10 tones(3 trolley)	1 trolley=Rs300	900
Fertilizer			
Urea	2 Bag(100kg)	Rs260/50kg	520
DAP	1 Bag(50kg)	Rs470/50kg	470
Zinc Sulphate	10 kg		160
			3840
		Total for 60 acres	3840/60=64
		For 1 acre	64
Therefore the expense of preparing seedling for 1 acres= 200+64=264			
Average amount for 1 acre= 265			

* 1 acres nursery preparation meets the requirement of 60 acres of land

Appendix Table 6.1.2: Operational costs and returns in Conventional Farming

Seed Bed Preparation			835
Puddling			755
FYM			0
Cost of nursery			265
Transplanting			500
Fertilizers			
Urea	2.5 Bag(100Kg)	Rs 250/Bag	625
DAP	1Bag(50Kg)	Rs 500/ Bag	500
Zinc sulphate	10Kg		160
Pesticides			
Chlorpyriphos	2 litre	Rs 170/Litre	340
Cartap(Padan)	2 bag *2 times	Rs 270/bag	540
Tricyclazone	120gm	Rs300/120gm	300
Maintainence			18
Weedicides			
Anilophos	I litre/acre	Rs1200/10litres	120
Harvesting			1250
Transporting	13 q	Rs15/q	195
Cleaning	13 q	Rs 5/q	65
Total expenses			6468
Yield/acre	13 Q/acre	Rs1500/quintal	19500
Premium			0
Total earning			
Net income			13032

Appendix 6.1.1
Application for Organic Production

To

The Project Co-ordinator (organic Basmati)
Agrocel Industries Limited
New Grain Market, Main Road
Behind Market Committee Office
Kaithal.

Sub: Application for certified organic Basmati paddy production

Sir,
I agree to produce certified organic Basmati paddy and rabi crops for your company as per the practices and conditions determined by you (SKAL-certified and fair trade). I do not have organic production agreement with any other company so far as the acreage determined by you is concerned. The following are the details regarding my farming:

Owner farmer's name: ----------
Address:----------
Total land:----------
Land for organic basmati paddy: ----------

Other information:

As informed by you, the company will pay for the additional cost (upto 10% of paddy price) incurred due to the production practices determined by you. Your company will buy the paddy produce and will give 15% premium over market price.
I promise to abide by the above conditions completely. Please grant your kind permission so that the work can begin soon.

Thank you

Yours sincerely
Signature

Date:

(Full name)

Appendix 6.1.2

AGREEMENT FOR ORGANIC PRODUCTION AND MARKETING
(on company letterhead with seal)

The contract dated _____ is with AGROCEL INDUSTRIES LTD. which has its registered office at Koday Char Rasta, Koday, Tal. Mandvi – Kutch , Gujrat. The company has authorised its General Manager , Shri Hasmukh Patel to sign on this agreement and he will be known as the first party of the agreement. The agreement is signed with Mr._____ ,S/O _____, resident_____who will be known as second party. The second party has ____ acres of land , on which it is doing organic farming and willing to join the organic farmers' group. The first party accepts this.
Both the parties agree to the following terms and conditions of the agreement:

1. The second party will practice organic farming methods on ----- acres of its agricultural farm as per organic production manual which will be based on the standards of Soil Conservation Association. The second party agrees to keep this land under organic system for a minimum period of 5 years.

2. The second party agrees to become a part of the group which is committed to organic production. It would use organic practices and techniques and will supply the produce to parties willing to take the organic produce.

3. The second party has to promise that it will neither work in any way against the interest of the farmers in the group nor organic farming practice. And, it will not violate the organic production and storage methods, will fully cooperate with Agrocel Industries Ltd. and work as a part of the team.

4. The organic farm of the second party will be inspected by the Agrocel Industries Ltd. at regular intervals and the second party will be made aware of the report or advice.

5. The second party agrees that it will abide by the suggestions of the internal inspection committee on the organic farm, and would also allow to take/collect the samples of soil, plants and trees, water, animal excreta and agricultural produce.

6. If at any point of time, the internal inspection committee feels that the methods employed by the second party are not organic, in that case, the first party will have full rights to expel the second party from the organic farmers' group and will not buy any agricultural produce from the accused (second) party.

7. The second party agrees that it will provide full cooperation to any inspection committee (internal and third party) in every inspection which will include besides agricultural farms, storage and livestock. The inspection by the third party will be carried out at least once a year. The decision of the first party regarding the selection/appointment of the inspectors for this inspection will be final.

8. The second party agrees that it will help Agrocel Industries Limited in completing all farm documentation required in organic inspection and certification. The second party will also declare the last used agro chemical solution in its farm.

9. The second party agrees to sow, farm and harvest the organic produce in accordance with the standards laid down by organic farm produce certification agency.

10. The second party is committed by this agreement to store the organic produce separately in a safe place, free from all sources of biological and chemical contamination as per the guidelines of the first party. The second party can label its produce as organic only after certification by a third party certification agency.

11. The second party is bound by this agreement to label and transport the organic produce as instructed by the first party which will be in accordance with organic production and transportation standards as prescribed by the organic produce certification agency.

12. The second party agrees to participate in all the meetings arranged by the first party for crop planning and for organic production training to farmers. The second party also agrees to adhere to the crop rotation decisions taken in these meetings.

13. The first party agrees to buy the produce as will be decided mutually in the general committee including details about price and quality aspects of the produce.

Terms of Payment and the Incentive structure will be as follows:

A. Certified organic produce: 10% of the market price of basmati paddy will be paid to farmers as compensation for additional costs of organic production. Further, 15% of the market price of basmati paddy will be paid as incentive to growers. These payments will be made on the spot.
B. In conversion produce: 10% of the market price of basmati paddy will be paid to farmers as compensation for additional costs of organic production. Further, 15% of the market price of basmati paddy paid as incentive to growers will be kept as deposit with the bank/Agrocel Industries Limited and will be paid after the farm is certified organic.

14. The first party agrees to provide organic farming extension services to help the farmer to achieve high quality organic production in sufficient
quantity. In addition, it will support them in internal quality assurance programme so that farmers' group and the second party could achieve high
quality organic production. Further, the first party (Agrocel Industries Limited) will try to help farmers in organic soil management suitable for rabi
crop.

Both parties agree to all the terms of the above agreement from kharif crop year ---------.

For Agrocel Industries Limited

Farmer
Address

Date:

Place:

Appendix Table 6.1.3
Agrocel comparison of Organic Basmati production

Table: A Comparison of operational costs of and returns from Inorganic and Organic Basmati paddy cultivation in Kaithal (2005) for 19 (145-155 days) and CSR-30 (135-145 days) conventional and HBC-19 (145-155 days) organic varieties

Activities	Inorganic Package	Cost/Acre	Organic Package	Cost/Acre
Nursery bed (seed and fertilizers)	6 kg seed, seed treatment and ploughing	300	6 kg. seed, seed treatment and ploughing	300
Land preparation	By tractor (3 operations each in dry and wet)	950	By tractor (3 operations)	950
FY M + Green Manuring	FYM = 15 Tons	600	FYM = 15 Tons Green manure crop=18 kg. seed	800
Fertilizers	Urea = 50 kg/25 kg. DAP = 25 kg. Zinc Sulphate = 10 kg.	700	Rock Phosphate 50 kg. Bio-organic manure-5 bags Organic product-16 kg.	1245
Transplanting	Manual	400	Manual	400
Weeding	Butachlor/Anilophos – 1 Lt/Acre	200	Manual	400
Soll Insecticides	Cartap Hydrochloride	280	Neem cake- 25 kg.	160
Insecticides spray	Monocrotophos= 500 ml Endosulfam = 500 ml	210	Azadaractin-1000-1500 ml and BT/BL (Larvocel) – 700 gm.	350
Fungicides spray	Bavistin = 300 gm or Hexaconasole- 300 ml	125	Ovis (Lantana Camara) - 300 gm/Pseudomonas -1 kg.	110
Harvesting	Manual	1000	Manual	1000
Other expenses	Cleaning, transport, etc.	200	Cleaning, transport, etc.	200
Total expenses (Rs.)		**4965**		**5915**
Yield (Kg./acre)	1050 Kg.		1000 Kg.	
Gross Income (Rs./acre)	Av. Price Rs. 14-/kg.	14700	Av. Price Rs. 17.50/- kg.	17500
Net profit (Rs./acre)		**9735**		**11585**

Source: Agrocel Branch Office, Kaithal.

Appendix 6.1.4
AGROCEL INDUSTRIES LIMITED

ORGANIC BASMATI PRODUCTION DIVISION
ORGANIC FARMER'S DAILY DIARY

Farmer's Name:_____

Village:_____

Tehsil: _____ District: _____

State:_____ Tel. No.:_____

Survey / Plot No. : _____

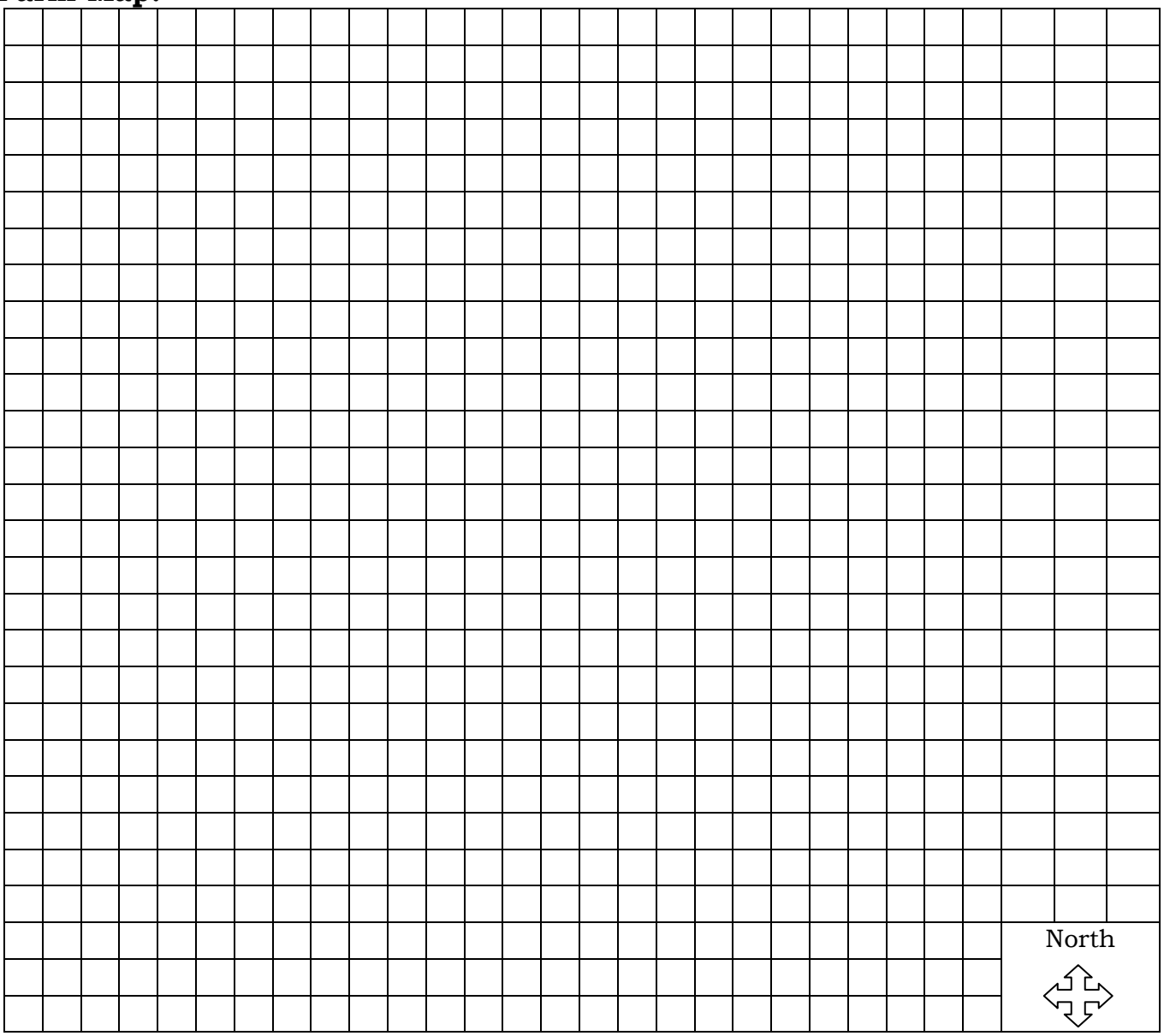
Year : from _____ To: _____

Farmer's Signature: _____ Date: _____

Signature of Representative: _____

Name of Representative: _____

Farm Map:



1. Input records

1. Fertilizer Details:

	Compost and other Organic manure purchase					**Application of Organic Manure in farm**			
	Name of Fertilizer	Quintal or Kg.	Date purchased and Bill No.	Purchased from	Amount	Name of Organic manure	Date of Application	Application rate in Acre	Crop / Plot No.

2. Seed Details:

Sr. No.	Crop	Plot No.	Date of purchase and bill No.	Origin of Seed	Variety	Quality	Quantity	Amount of total Seed	Planting / Seedling rate

3.Seed treatment details:

Sr. No.	Seed	Used Agents	Seed treatment method

4. Equipment Details:

Sr. No.	Name of equipment used	Date of usage	Nature of operation	Crop/Plot	No. of hours or days

5. Labour Details:

Sr. No.	Nature of Work	Date	No. of workers (family)	No. of other workers	Duration of work	Wage rate	Total expenses of labour

6. Equipment cleaning and preventive maintenance:

Sr. No.	Name of equipment	Cleaning and maintenance procedure	Date of cleaning / maintenance

7. Plant Protection Details:

Material used	Purchased from with Date of purchase and bill No.	Cost of Materials	Date of application	Crop/plot	Application rate

2. Output Records:

1. Main crop details:-

Sr. No.	Crop	Plot No.	Season	Area in acres	Total production (Qtl./acre)	Harvested products

2. Inter cropping details:

Sr. No.	Crop	Plot No.	Season	Area in acres	Total production (Qtl./acre	Harvested products

3. Storage details:

1. Inventory Details.

Sr. No.	Crop	Plot No.	Date	Quantity-in	Quantity-out	Quantity in Balance	Quality of stored product

2. Maintenance of Storage Facility:

Sr. No.	Type of Storage facility	Storage area in square feet	Date of Cleaning	Cleaning procedure	Date of inspection of storage facility	Signature of internal Inspector

4. Livestock details:

Input record

1. Fodder Details

Sr. No.	Type of fodder	Origin of fodder	Date of purchase	Quality of fodder	Quantity of fodder	Amount

2.Output Record:

Sr. No.	Items	Quantity	Quality	Date of produce

3. Medicine Details:

Sr. No.	Type of medicine	Origin of medicine	Date of purchase	Expiry date of medicine	Quantity of medicine	Amount

4. Fodder Storage Details:

Sr. No.	Name of Storage item	Plot No.	Date	Quantity-in	Quantity-Out	Quantity in Balance	Quality of stored product

Recycling of organic matter:

Sr. No.	Items	Quantity	Quality	Total Organic matter

Medicine Storage Details:-

Sr. No.	Name of Storage Items	Date	Quality-in	Quality-out	Quality in Balance	Quality of stored product

Sr. No.	Name of Internal Inspector	Date of Internal Inspection	Recommendation	Signature of Internal Inspector

Box

PICRIC LIMITED, DELHI

PICRIC was founded in the year 1992 as 100% Export Oriented Unit and has since become a pioneer in the field of rice. PICRIC is today one of India's major producer and marketer of fine quality BASMATI RICE. Its turnover registered a sharp increase from US$ 7 million in 1994-95 to US$ 50 million in the year 2002-03. It is ISO 9001:2000 certified by Underwriter Laboratories INC, USA and has the status of a Trading House granted by Govt. of India. It was recognised by the Haryana State Govt. for Outstanding Performance in export. It is also granted Star Performer status by the Ministry of Commerce and Industry, Govt. of India. It has also been granted In-Process Quality Control (IPQC) certification by the Ministry of Commerce, Govt. of India for Self Certification of Rice Quality. The rice supplied by it is available in more than 50 countries worldwide. It is also involved in basmati seed production including organic basmati seed. It is one of the first companies in India to introduce BLOCK BOTTOM PACK to enhance visibility. Besides organic basmati, it also deals in Organic Lentil, Organic chickpea and Organic sugarcane. It has a rice processing and packing plant located in a sprawling 43 acre complex on the National Highway in Hrayan near Sonepat.

Vee Tee Rice

By 1986, the company was up and running: the Basmati market in this country was, at that time, underdeveloped and long grain rice was predominant. However, the Asian community provided a sufficient market. From an initial investment of £200,000 in a factory at Perivale, the business grew and by 1989, the need for larger premises became apparent. In 1990, Veetee Rice transferred its home to Rochester, Kent, where larger premises and excellent transport afforded by the River Medway presented new possibilities. The new site required huge investment, particularly as all buildings had to be piled to avoid subsidence. The current factory has received over £20 million investment, and has the facility to carry out the cleaning, milling and packing of different rice grains, all under one roof.

Veetee is currently the largest rice supplier in the UK retail trade, supplying both Veetee and supermarket own-brands. Veetee are also unique in rice manufacturing, as they are the only company to have factories in both India and Pakistan, making them perfectly placed to supply both communities. Future investments will ensure that Veetee stay ahead of the game. Aside from his passion for the rice industry, Moni is involved in a number of outside interests. He maintains a rice mill, cashew nut farm and pulses plant in his native Malawi, as well as a paint factory and dabbles in the odd steel project.

Production and procurement

It works with farmers in 70 villages including Agrocel villages where agrocel manages 70 farmers on its behalf. It pays Agrocel Rs. 500 per acre as service charge for organizing organic production. It has no contract farming for conventional basmati which is bought from APMC mandis only. It had tried Contract Farming but failed due to farmer default as local basmti price is not an indicator of real prices. The company organises organic seed production for better quality, yields and better recovery where in it has 3-4 farmers under contract for seed production.

It has written agreement with contract growers (appendix box 1) and also with Agrocel as service provider. It does not buy other organic produce of contract growers as it has not been able to sell it in the past where it bought at premium but sold at market rate. Its entire supply chain for organic,

except organic production co-ordination, is managed in house from procurement to packaging but some of the conventional rice processes are outsourced some time.

Organic Certification and product range of conventional basmati

Its farmers are SKAL certified. It has organic certified 100% EOU integrated rice mill at Sonepat. Its conventional basmati product range includes 100% pure traditional Basmati, quality guaranteed, carefully matured for at least 1 year after harvesting, available in full range of sizes, attractive Resealable metallic block bottom 500g, 1 Kg and 2 Kg packs, attractive 5 & 10 Kg Paper bags with handle, Innovative and easy-to-use 5 Kg jars for catering sector, and durable 20 Kg plastic sack. The packaging imcludes: Laminated Paper Bags, Cotton Bags, Pouches, Poly Laminated Bags, Jute Bags, and Jars. It has 9 brands of conventional basmati rice in domestic market and three in international market.

Export Marketing

Picric does not brand organic basmati as it has no direct sales in European export market but has been selling for the last three years in importers' brand names (three). Organic basmati sales (500 tonnes) is only 1% of its total sales of basmati (45,000 tonnes). It is also exploring direct selling of its rice in export markets. It has annual contracts with foreign buyers. It was also in trading of other commodities but has stopped now. Now, its busines is made of rice upto 99% of total business and 99% of organic rice is for export market buyers.

Domestic Sales Strategy

It is trying to sell organic basmati through its existing channel for conventional basmati in India where it has 50 distributors It is also exploring networking with supermarkets in Delhi and Bangalore for mainstreaming its basmati rice. However, major barrier is high prices of organic produce in domestic market which need to come down by cost cutting for expanding the market base. It does not intend to go into fair or ethical trade as its organic basmati is sold in conventional market and they do not ask for these standards. Small volumes is a major problems in organic produce markets. The problem is also with supply side as required quantities are not available today. The farmer is also dependent on single buyer. So, he can not really make money by selling elsewhere as no alternative markets exist. Organic basmati can be sold in bulk at grocery shops but the problem of weevil is serious as no fumigation is permitted by organic standards.

Box Appendix 1

PICRIC LIMITED

AGREEMENT FOR ORGANIC PRODUCTION AND MARKETING
(on company letterhead with seal)

The contract dated _____ is between Ms PICRIC LTD. which has its registered office and works at Veetee House, 56-57 K.M. , G T Karnal Road , Vill.and PO Larsauli, The. Ganaur Distt, Sonepat and has authorised its Deputy Manager (Production) Dr. D K Mehan to sign on this agreement and who will be known as the first party of the agreement, and Mr._____ ,S/O _____, resident_____who will be known as second party. The second party has ____ acres of land, on which he is doing organic farming and willing to join the organic farmers' group. The first party accepts this and agrees to the following agreement.
Both the parties agree to the following terms and conditions of the agreement:

2. The second party will practice organic farming methods on ----- acres of its agricultural farm as per organic production manual which will be based on the standards/principles of Soil Conservation Association. The second party agrees to keep this plot of land under organic system for a minimum period of 5 years.

3. The second party agrees to become the part of the group which is committed to organic production. It would use organic practices and techniques and will supply the produce to parties willing to take the organic produce.

4. The second party has to promise that it will neither work in any way against the interest of the farmers in the group nor organic farming practice. And, it will not violate the organic production and storage methods, will fully cooperate with Agrocel Industries Ltd. and will work as a part of the team.

14. The organic farm of the second party will be inspected by the Agrocel Industries Ltd. at regular intervals and the second party will be made aware of the report or advice. The first party will also be provided with information relating to organic certification.

15. The second party agrees that it will abide by the suggestions of the internal inspection committee on the organic farm, and would also allow to take/collect the samples of soil, plants and trees, water, animal excreta and agricultural produce.

16. If at any point of time, the internal inspection committee feels that the methods employed by the second party are not organic, then in that situation, the first party will have full rights to expel the second party from the organic farmers' group and will not buy any agricultural produce from the accused (second) party.

17. The second party agrees that it will provide full cooperation to any inspection committee (internal and third party) in every inspection which will include besides agricultural farms, may relate to storage and livestock. The inspection by the third party will be carried out at least once a year. The decision of the first party regarding the selection/appointment of the inspectors for this inspection will be final.

18. The second party agrees that it will help Agrocel Industries Limited in completing all farm documentation required in organic inspection and certification. The second party will also declare the last used agro chemical solution in its farm.

19. The second party agrees to sow, farm and harvest the organic produce in accordance with the standards laid down by organic farm produce certification agency.

20. The second party is committed by this agreement to store the organic produce separately in a safe place, free from all sources of biological and chemical contamination as per the guidelines of the first party. The second party can label its produce as organic only after certification by a third party certification agency.

21. The second party is bound by this agreement to label and transport the organic produce as told by the first party which will be in accordance with organic farming and transportation standards as certified by the organic produce certification agency.

22. The second party agrees to participate in all the meetings arranged by the first party and Agrocel Limited for crop planning and for organic production training to farmers. The second party also agrees to adhere to the crop rotation decisions taken in these meetings.

23. The first party agrees to buy the produce as will be decided mutually in the general committee including details about price and quality aspects of the produce.

Terms of Payment and the Incentive structure will be as follows:

1. Certified organic produce: 10% of the market price of basmati paddy will be paid to farmers as compensation for additional costs of organic production. Further, 10% of the prevailing market price of basmati paddy at the time of purchase of certified organic produce will be paid as incentive to growers. These payments will be made on the spot.
2. In conversion produce: 10% of the market price of basmati paddy will be paid to farmers as compensation for additional costs of organic production. Further, 10% of the prevailing market price of basmati paddy paid as incentive to growers will be kept as deposit with the bank/Picric Limited and will be paid after the farm is certified organic.

24. The first party agrees to provide organic farming extension services to help the farmer to achieve high quality organic production in sufficient quantity for the farmer group and the second party. In addition, it will support them in internal quality assurance programme so that farmers could achieve high quality organic production. Further, the first party and Agrocel Industries Limited will try to help farmers in organic soil management suitable for rabi crop.

Both parties agree to all the terms of the above agreement from kharif crop year ------.

For M/s. Picric Limited
(authorized signatory)

Farmer

Address

Date:

Place:

Appendix 6.2- Case Study 2
Satluj Organics

SUTLEJ ORGANICS – a division of Sutlej Power Pvt. Ltd.- was formed during the year 2002. Sutlej Power Pvt. Ltd. was incorporated in the year 1996 under the Indian Companies Act with the objective of undertaking generation of electricity by harnessing hydel resources with an authorized capital of Rs.10 million. The division (Sutlej organics) was created for promoting organic agricultural and allied products by developing contracted farms and facilities across the Indian sub-continent. Due to its resources, and business opportunities, Sutlej Organics, in addition to developing new farms, was also able to contract several farms which had already adopted organic farming. These were under different stages of organic status like fully organic and 'in-conversion' under certification norms.

It started with 600 acres of poplar plantations in 1996 and 30 acres of organic farming in Lakhmipur Khed in UP. It succeeded in 1998 and it had 250 acres under organic by 1999 and 600 acres by 2000. By 2001, it grew organic in 820 acres with 250 acres of family farm in Punjab. In 2001, the company it was supplying to (Indian organics Ltd. By H S Grewal) was dissolved. Sutlej Organics has emerged as one of India's largest developers of organic produce. Sutlej Organics has identified and tied up several farms across Punjab, Uttar Pradesh, Uttaranchal and Haryana, which lie in the indo-gangetic plain at the base of the Himalayan mountain range. These farms were either already growing their crops without the usage of chemical fertilizers, insecticides, hormones and weedicides under the standardized organic certification format or were willing to adopt these practices.

Organisation of corporate and contract farms

Now, it has total of 43 organic certified farmers: 2 in Uttaranchal, 11 in UP with 100 acres each and one with 1200 acres alone, 8 in Punjab with 600 acres and one in Haryana. Total certified organic acreage is 2200 acres with paddy in 600 acres. It is also into organic cotton, and many fruits like litchi, banana, chickoo, guava and kinnow. It plans to have 10,000 acres by 2006 with 5000 acres certified and 5000 acres under conversion. It practices both corporate as well as contract farming. Thus, 2/3 of the total acreage is leased and 1/3 under contract system. Its corporate farm is totally certified by IMO Control and most of the leased in and contracted acreage is under conversion. In 2003-04, it had 155 hac land under A grade certified organic basmati and 15 hac land each under first and second year of conversion. Besides, there is 97 hac land under grade B certified organic and 7 hac land under year two and 28 hacs under year one of conversion. There were also 90 hacs

under sugarcane in certified category and 6 and 55 hacs each in second and first years of in-conversion. There were also 61 hacs under garlic as a rotation crop which was certified. Other crops had 125 hac area of which 36 hectares was certified organic and the rest under various stages of conversion.

The criterion for selecting these farmers in the first phase was that their lands must either already be under certification from accredited certifying agencies or they agree to bring their lands under certification through adhering to the prescribed practices and having their lands, crops and practices inspected by the accrediting agency.

There are written contracts with growers on a Rs. 50 stamp paper (see appendix 6.2.1). The agreement is for five years with a two-month termination notice. The seed and other manufactured bio inputs are arranged by the company. A land registration agreement is also signed with the contract grower. The basmati seed varieties used are HBC19, KLM, and SB3000 with the last one being grade A. The farmers are paid a premium of 5% over market price in the first year, 20% in the second year, 35% in the third year, and 50% in the fourth year. In sugarcane, wheat and pulses, it is 0%, 10%, 15% and 20% respectively. With 50% premium, the farmers make good money. It is more practical instead of a fixed price. Last year, it paid premium on a market price of Rs. 1400 per qtl. The reference price is for the local mandi which is mutually agreed. and transport cost is charged from the farmer if some non-local mandi is considered.

The company also leases in land. It leased in 3000 acres in 2004 at the rate of Rs. 8000 per acre and on a long term of eight years for corporate farming. The leasees are given 10% raise in rent every year.

ICS and certification

Its produce is certified by IMO control as per NPOP standards and also by APEDA. The quality control is carried out by SGS in terms of size of grains, color, chemical residue, and foreign matter. It has total staff strength of 12 and of this six are field staff with one manager and five inspectors – one for each crop/region who make fortnightly or weekly visits to farms (Fig. 6.2.1).

For each farm, a farm map is prepared with details of organic and inorganic area, name of the farmer, crops, seasons, acreage under each crop and land marks by the field officer (appendix 6.2.2). There is also a record of sowing operations with quantity of seed used, source of seed, and status of seed etc. for each field and acreage/area (appendix 6.2.2). Further, for paddy, there is record of transplantation dates for each crop, area and field number (appendix 6.2.2). There is also

a record of weeding operations with specifications of manual and mechanical methods (appendix 6.2.2). Similarly, there is monitoring of water management, fertilization, plant protection of the crops with sources specifications and irrigations, type and quantity of input used/ given to a crop/field (appendix 6.2.2). The harvest of crops is also recorded (appendix 6.2.2). The post harvest operations are recorded in details with specification of crop, date of various PH operations like threshing, cleaning, bagging, transportation and even vehicle number etc (appendix 6.2.2). The internal inspection report has details of farm visited, crop, observations and action required with remarks (appendix 6.2.2).

The certification cost is about Rs. 1000 per acre and certification is with the company not the farmers as the company pays for it.

The job milling of organic paddy is done in an IMO organic certified mill (Shri Hargobind Rice mills, Raikot) in Ludhiana district in Punjab. The rice recovery rate is 70%.

Networking

The Company has also entered into an agreement with Punjab Agro Foodgrains Corporation Ltd., Chandigarh, a Government of Punjab enterprise for facilitating promotion and procuring of organic produce in the state of Punjab. Punjab Agro Industries Corporation Ltd., another enterprise of Government of Punjab, is in the process of establishing a Food Park at Sirhind, Punjab. The company has agreed to join hands in the project.

Product range

The company has successfully exported large quantities of Organic Brown Basmati Rice after propagating the crops at farm levels and processing the farm produce into brown rice. It also deals in organically grown wheat, Peppermint, Spearmint, mint oil, jaggery, sugar and molasses. Thus, the existing products of Sutlej Organics are:

1 Organic Brown Basmati Rice
2 Whole Wheat
3 Wheat Flour
4 Peppermint Oil
5 Spearmint Oil
6 Jaggery

7 Sugar

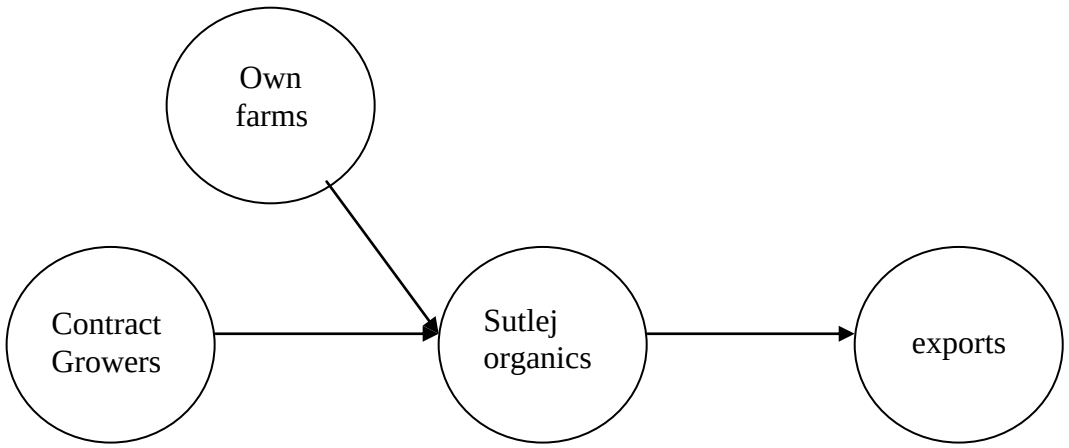
8 Forest Honey

In addition to the existing product range, Sutlej Organics has planned to develop, grow, procure, process and export local and exotic assorted organic vegetables and Guar gum..

Marketing

The company sells about 750-1,000 tonnes annually. Its major markets are in EU, Germany, Switzerland, and France which give sales of the order of Rs. 10 crore. It sells to importers in bulk with no brand name. It offers produce at its own quality certification standards which buyers can take or leave. In domestic market, it is promoting demand for its products by free delivery of the basmati rice to some institutions like embassies and high-income consumers. It is meeting some of the ethical and fair trade conditions for better price premiums in international market. The export price of the company's organic basmati rice is Rs. 80 per kg. Since 2002, it sells organic basmati rice (5 kg. packs) and jaggery under the brand name of Bio-organics. In domestic and export market, it considers Sunstar as the major competitor (see box).

Fig. 6.2.1: Sutlej Organic Basmati rice Supply Chain



Appendix 6.2.1

Provisions of the Cultivation Agreement of the SOPL (between company and farmer)

1. organic farming by grower
2. sale only to SOPL and will register land for organic production through land registration form
3. SOPL will inform the grower about the crop/s to be grown, none month before sowing
4. technical knowhow, seeds, manures, to be used as advised by the SOPL. SOPL will organise supervision of the crop for internal monitoring and even will do external inspection by appropriate authority for organic certification
5. Farmer will provide free access to SOPL and its representatives to its farm and crops
6. All produce to be sold to SOPL on agreed terms sand conditions
7. All post harvest operations as per SOPL advice
8. SOPL will buy certified and/or inspected produce ass per terms and conditions. The reference markets for determining price will be:

Basmati – Bulandshahar in UP
Rudrapur in Uttaranchal
Traori in Haryana and
Amritsar in Punjab

For sugarcane, it will be nearest sugar mill
For wheat, it will be MSP in mutually agreed markets
Premium specified are 5% over market price in the first year, 20% in second year and 35% in the third year and 50% in fourth year. In sugarcane, wheat and pulses, it is 0%, 10%, 15% and 20% respectively. They are to be paid on receipt of the inspection report and within 90 days of delivery of produce

9. No premium for exotic crops (imported)
10. Use of non-permitted (non-organic) input swill lead to farmer being disqualified
11. nondelivery will lead to indemnity
12. Extra contractual sale will be penalized as follows:

1. damages that SOPL pays will be recovered
2. compensation for loss of profit to SOPL at the rate of average of last three years
3. cost of inputs and other expenses

13. No right to sell product to any other party
14. Contract agreement valid for five years and extendable by mutual consent
15. SOPL can terminate the contract on a two month notice
16. amendment of terms by mutual consent
17. arbitration for dispute with one from each party who will then appoint an umpire as per Indian law of arbitration. His decision will be final
18. Delhi courts jurisdiction only
19. All recitals to this agreement also integral part of the agreement

Appendix
Land registration form

Appendix 6.2.2

SUTLEJ POWER PVT. LTD.

FARM MAP

Map with field numbers, area and permanent landmark

Name of Farmer _____ Farm Code _____

Total area of the Farm _____ Organic area _____ (Acre) Season _____

Field Officers' Signature: _____

SUTLEJ POWER PVT. LTD.

Field No. and Area of the Farm Map

Farmer's Name _____

Period _____ to _____

Crop	Area (acres)	Field Number	Area (Acres)

Field Officer's Signature: _____

SUTLEJ POWER PVT. LTD.

Details of Sowing Operations

Farmer's Name & Code _____Season _____

Date	Crop	Area (Acres)	Field Numbers	Qty. of Seed Used (kg.)	Source of Seed	Status of Seed	Remarks
Field Officer's Signature: _____							

SUTLEJ POWER PVT. LTD.

Details of Transplantations

Farmer's Name & Code_____ Season _____

Date	Crop	Area (Acres)	Field Numbers	Remarks

Field Officer's Signature: _____

SUTLEJ POWER PVT. LTD.

Details of Weeding Operations

Farmer's Name & Code_____ Season _____

Date	Crop	Area (Acres)	Field Numbers	Manual / Mechanical Labour	Remarks
				Field Officer's Signature: _____	

SUTLEJ POWER PVT. LTD.

Details of Water Management

Farmer's Name & Code_____ Season _____

Date	Crop	Area (Acres)	Field Numbers	Sources of Water (Borewell, Canal, Pond, Lake etc.)	Remarks
				Field Officer's Signature: _____	

SUTLEJ POWER PVT. LTD.

Details of Fertilization Activities

Farmer's Name & Code _____ Season _____

Date	Crop	Area (Acres)	Field Numbers	Input used (Name of input)	Qty. of Input (Kg. or Litres)	Remarks
					Field Officer's Signature: _____	

SUTLEJ POWER PVT. LTD.

Details of Protection Measures

Farmer's Name & Code _____ Season _____

Date	Crop	Area (Acres)	Field Numbers	Input used (Name of input)	Qty. of Input (Kg. or Litres)	Remarks
					Field Officer's Signature: _____	

SUTLEJ POWER PVT. LTD.

Details of Harvest

Farmer's Name & Code_____ Season _____

Date	Crop	Area (Acres)	Field Numbers	Remarks
				Field Officer's Signature: _____

SUTLEJ POWER PVT. LTD.

Post Harvest Operation

Farmer's Name & Code_____Season _____

Crop	Date of Threshing	Date of Cleaning	Date of Bagging	Number of Bags	Date of Transportation	Vehicle No.	Remarks (Tagging / Labeling of Bags etc.)
							Field Officer's Signature: _____

Sutlej Power Pvt. Ltd.

Internal Inspection Report:

Date	Farm Visited	Farmer's Name & Location	Crop at present	Observation	Action Required	Remarks

Box
Sunstar Overseas Ltd. – the competitor

Production Operations

About 70% of its contract farmers are small and under fair trade. It is certified for fair trade by FLO for 600 of its farmers but only about 295 are actually working with the company. It is also an SGS certified project. It is into organic basmati since 2001 and entered into other crops like wheat, pulses and oilseeds afterwards. It started with 100 farmers in 2001 and has now 300 organic basmati farmers in Uttaranchal under single crop system, and others in Haryana, and U.P. under double crop system. It is one of the top five companies in basmati and the largest in India in organic basmati with a presence of 14 years in the basmati market. It also claims to be the largest exporter of organic basmati to Europe. It has a five year written contract with growers. It has 5-6 extension staff under an extension supervisor. The farmers are given an organic produce premium, over and above the market price of basmati rice, to the extent of Rs. 100 per quintal in the first year, Rs. 200 in the second year and Rs. 300 in the third year. Also, organic inputs like biofertilisers, biopesticides, neem, gypsum and rock phosphate are supplied on credit. The extension cost is Rs. 508 per acre or Rs. 50 per quintal. The cost of production of organic basmati is lower than that of the conventional basmati. It has also been certified biodynamic (by demeter) this year for basmati. The produce is procured from the farmers' fields through commission agents and they are paid a commission of 4% for it. These agents are also the suppliers of organic inputs, credit (Rs. 400-500 acre) and extension and they are responsible for recovery of company's input costs. The inputs are procured from organic input agencies like Maple organic. The farmers are trained in organic production practices through seminars and guest lectures by experts in the field. It has 80 farmers under biodynamic project with 400 acres of crops. Its certification is in the second year of conversion (2004). The cost of certification is about Rs. 1000 per farmer or Rs. 100 per acre. The entire produce is bought within 45 days of the harvest to avoid post harvest management problems. It is also into conventional basmati contracting 6000 acres in Punjab though Escorts which acts as facilitator.

The company incurs a cost of Rs. 1.5 lakh per year for farmer incentives and awards. Iti has been giving the best farmer award to 5-10 farmers every year based on commission agent and extension staff reports. The company buys only one season crop (basmati) and not wheat as it is not certified. The farmers sell it in the open market. There is some loss in yield of wheat due to conversion to organic. Pulses and oilseeds have not been found to be viable under given yield and price conditions. The farmer default is only when a farmer sells off land and becomes a non-landholder, his lease expires or has some complaint against the company for lower organic yields.

Processing of Paddy

Sunstar's paddy processing plants (three) are located on National highway near Karnal, about 40 kms. from New Delhi. The plants have production capacity exceeding 14 tons per hour, and are equipped with number of Pre cleaners, De-stoners, Precision-sizers, Grades, Paddy separators, De-huskers, Magnets etc. The state-of-art processing plant for

rice production has fully mechanized sophisticated processing procedures for different stages like demosturising, temperature controlled drying, cleaning, dehusking, destining, polishing, sorting and grading. Most of the impurities, irrespective of their sizes and nature are completely removed in different stages of the passage of paddy through fork-like vibrating sieve, scalper suction fan and vibrating sieve incorporated in these machines. Sunstar has technical back-up of Cimbria, Bhuler (Germany) and Satake (Japan) for providing the ultra-modern technology, to enable constant upgradation of rice processing and control systems, compatible with global standards and optimization of production facilities. A series of colour sorters and multi sorters are installed at Sunstar. When the rice is passed through these series of sorting machines, it gets free from glass, plastic granules, foreign material, dust material, damaged, discolored and unwanted grain.

Marketing of produce

Sunstar's rice is available in packs from 500 grams to 50 Kg in variety of packaging in cardboard and laminated boxes, laminated poly pouches, white polyline cotton, natural jute, paper bags and polythene. Its annual turnover was Rs. 1000 million in 2000.

The organic basmati is exported ot Eurpore i.e Germany, Switzerland, UK, France, Belgium and Holland. It sold 250 tonnes under fair trade with Max Havaller in 2003-2004. Its total sales were 1600 tonnes of organic basmati which was only 2.6% of the total business of the company (60,000 tonnes). The produce is exported in bulk only to importers. It has not yet entered the domestic market for organic basmati. The produce is rejected due to post harvest problems like weavels in stored rice and last year, the infestation loss was Rs. 15 lakh.

The major competitors of the company in organic basmati are L&T Overseas and Picric, both in procurement and marketing.

Appendix 6.3- Case Study 3

Uttaranchal Organic Basmati Project

Introduction

Uttaranchal has a net sown area of the order of only 14.02% of the total cultivable area of the state with only 9.43% being irrigated. More than half of the state's area is hills (57%). The state has a cropping intensity of 160.6% and per capita agricultural land 0.150 ha. Marginal farmers (less than 1 ha.) own 25.45% of total area and are 70.66% of all farmers, small farmers (less than 4 ha.) have 50.23% of total area and are 26.02% of all farmers and medium farmers (10 ha. and above) have 24.32% of area and are 3.32% of all farmers (Bisht, 2005). Average yield of cereals and millets is 20 and 25 qtls. per hectare respectively. Hardwar, US Nagar and Nainital have productivity per hectare above the state average (16.22 kg./hac) and above average fertilizer consumption (US Nagar 262.85 kg./hac compared with national average of 87 kg./hac). The cropping intensity across regions varies from less than one in high altitude areas (1800-3500 mts.) with main crops being amaranth, buckwheat, peas and potato, to two or even higher in low altitude regions (less than 1200 mts.) where wheat, paddy, maize, oilseeds, onion, potato and other vegetables are the main crops (Bisht, 2005).

Potential organic produce from Uttaranchal include Cereals, Millets and pseudo cereals, Pulses and beans, Oil seeds, spices, off season vegetables, flowers, fruits and nuts, and herbs and medicinal plants, allied agricultural products i.e beekeeping (honey), mushroom, poultry, fishery, and value added products i.e. processed cereals, millets and pseudo cereals, processed fruits, vegetables, nuts, herbs and medicinal plants, and processed allied agricultural products (Bisht, 2005).

Major organic players in Uttarancahl include:

- INHERE, Masi, Almora
- ATI, Ukhimath, Chamoli
- Terai Organic Farmers Association, Rudrapur
- Navdanya, Dehradun
- Individual and Private Efforts (Bisht, 2005)

Role of Government

Govt. constituted Organic Commodity Board, Established Centre for Organic Farming for technical support, internal control system and marketing support. 1,200 Bio-villages and 20,000 farmers were sensitized, 40 Organic commodities have been developed, NGOs are active and Rs. 35/- Lakh worth domestic market sales achieved besides export of rice to Germany (Koshy, 2005). The govt. of Uttaranchal also provides Rs. 200 per farmer to a service provider if it works with 1500 farmers at least (Bisht, 2005).

Organic Basmati Export Project

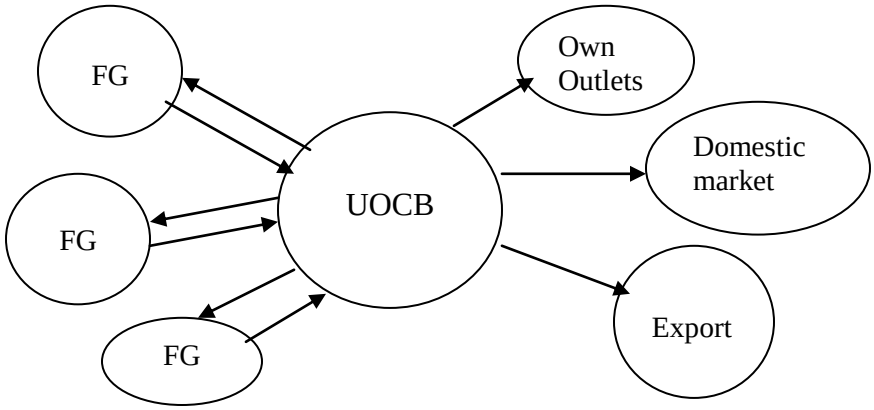
Dehraooni Basmati is a splendor of Doon Valley. Although several aromatic varieties rice are grown and consumed by the farmers of Doon valley but no other varieties of basmati has able to attain the status as Dehradooni Basmati. It is highly priced and delicious, in spite of its small grain size. It takes 125-135 days to mature and average yield is about 3000-3500 kg/ha. The important varieties grown are-Kasturi, Hansraj, Pusa 1, Sharbati, Pakistani basmati, Dehradooni Basmati (Type-3).

Indiscriminate use of chemical fertilizers and pesticides during last few decades had reduced the aroma and deteriorated the health of soil. In the mean time it also reduced the fragrance of Basmati. A concept was evolved to bring back the fragrance of Basmati through organic farming. Therefore in year 2002 Organic basmati cultivation program was taken in selected parts of Dehradun and from year 2003 onwards in Dehradun and Udham Singh Nagar.

The **Organic Dehradooni Basmati Project** was started in May 2002 to retrieve the lost glory of Dehradooni Basmati by the Diversified Agricultural Support Project (DASP) funded by the World Bank. It was a serious attempt to increase the production of Dehradooni Basmati by making the farmers go for its cultivation and in turn helping them in realizing premium price for the produce. (DASP) initiated the concept of Bio- villages in 1998. In the year 2002 it was decided to cultivate Dehradooni Basmati organically on trial basis. After successful implementation and positive results, the organic basmati program was expanded in Dehradun and Udham Singh Nagar with a total of 331 farmers (248 in Dehradun and 83 in Udham Singh Nagar) covering a total of 178.72 ha land

(131.92 ha in Dehradun and 46.8 ha in Udham Singh Nagar) under organic. The technologies adopted for organic cultivation included Biodynamic technology (170.72 ha) and Effective Microorganisms (EM) Technology (8 ha in Dehradun). Besides farmers were to make compost through vermiculture and Nadep method. During this period, a total of 252.472 tons of Organic rice was produced. (170.29 tons of Dehradooni Basmati, 1st year conversion, 13.2 tons of Dehradooni Basmati, 2nd year conversion, 34.107 tons of Pusa-1, 1st year conversion, and 34.875 tons of Kalanamak, 1st year conversion). Fig. 6.3.1 provides an overview of the supply chain of the UOCB for organic basmati rice.

Fig.:6.3.1. UOCB Organic Basmati Supply Chain



Input Supply

Table below shows the major suppliers of organic inputs**.** To promote the traditional Dehradooni Basmati and to conserve the traditional variety, three hectare land is taken up for production of traditional basmati seed at village Kesarwala.

Table 1: Availability of organic inputs and their cost

INPUT	SUPPLIER	MRP (Rs.)
Trichoderma powder	GBPUAT (Agricultural University	100/- per kg
Trichoderma	Excel Industries	189/- per kg
Biodynamic Preparations	Supa Biotech Pvt. Ltd., Nainital	125/- per pack
EM solution	Maple Orgtech (I) Pvt. Ltd., Dehradun	145/- per litre
Earthworms for vermicomposting	Several federations and NGOs	250/- per kg (1000 worms)
Seed	UA-TDC, Pantnagar	According to crop
Compost	Swarozgaris of TTDC	1.50/- Minimum per kg.

MRP = Maximum Retail Price
Source: Thimmaiah, 2004.

Change of Guard

After completion of the DASP (Diversified Agriculture Support Project) in March 2004, the Organic Basmati Production Program was adopted by Uttaranchal Organic Commodity Board and was renamed as Organic Basmati Export Program (O.B.E.P.). Field motivators of DASP were retained and called now as Field Officers. The farmers have to become members of the project and then sign an agreement for production (Appendix 6.3.1 and 6.3.1A).

ICS and Certification

The project has detailed farmer level as well as project level ICS for purposes of organic certification and record keeping in the form of farmer dairy and farm file respectively (Appendix 6.3.2A and 6.3.2B).

Procurement of produce

A tripartite agreement is signed among Farmers' Federation, Export agency (Tea Export Group), and U.O.C.B. for supply of and payment for Basmati (Appendix 6.3.3).

U.O.C.B. facilitated the export of Basmati to a German company. The company has committed to pick 200 MT Organic Basmati Rice for export in year 2006. A time bound action program has been implemented to achieve the end objective for cultivation of paddy that can supply at least 100 MT of Organic Basmati Rice each from the two districts.

Table 2: Area and Farmers under the UOCB Organic Basmati Project

District	Variety	Farmers	Area
Dehradun	Dehradooni basmati	314	147.5
U S Nagar	Taraori aromatic	96	84.6
All		410	232.1

Source: UOCB, 2005.

Technologies Adopted

Biodynamic Technology, Effective Microorganisms Technology, Nadep composting, Vermi composting, liquid manures and biopesticides along with Trichoderma, use of

pheromone traps, light traps and ITK would be applied as tools of organic farming practices in the field.

Table 3: Cost of Production of Basmati Paddy (US$/hectare)

Crop	Year	Organic	Conventional
Basmati Paddy	2002 2003	280 295	300 330

Note: cost includes major inputs: labor, fertilizers, etc.
Source: Thimmaiah, 2004.

Demeter Certification

In international market products certified by DEMETER fetch maximum premium. Therefore, it was decided to bring some area of cultivation for Demeter certification.

Pricing and Marketing Strategy

Farmers are paid 25 % premium over the prevailing market price of conventional basmati paddy which is being done by private agencies as well. It is surprising that a state agency is also doing this pricing (table 4). Tea Export Group, Kolkata has agreed for marketing of Organic Dehradooni Basmati and Organic Taraori from Udham Singh Nagar. It was proposed to export 200 tons of Organic Basmati Rice to a German Company in year 2006 which has very detailed quality specifications (Appendix 6.3.4).

Table 4: Price realization (US$) for Organic and Conventional Produce

		Organic Price		**Conventional Price**	
		Per tonne	Per hectare	Per tonne	Per hectare
	2003	550	1540	260	780
	2004	370	1036	280	840

Note: average price for the year
Source: Thimmaiah, 2004.

Appendix 6.3.1

Uttaranchal Organic Produce Council
Dehradun, Uttaranchal
Application for Certification of organic Produce

1. Organic producer/farmer's full name and address:

Name: Father/Husband's name:
Village/Mohalla: P.O.:
Block: Distt.:
Telephone:

2. Farm related information:

Location of farm: Identification:
Main way to farm (name): Distance from farm:
Distance by foot/vehicle:

3. Total farm acreage at present (hectares, farmer's own):

Type of enterprise	organic	conventional/chemical	others
Crop	area	area	
Horticulture	area	area	
Vegetables	area	area	
Animal husbandry	area and number of animals		

4. Produce/crop which is to be certified (details):

No.:	Name of crop/produce	Timing of sowing	Timing of harvest	Esti. Prodn. (Qtls.)

5. Irrigation availability and source:
6. Farm equipment availability and name:
7. No. of tubewells and location:
8. Storage system and capacity:
9. Produce segregation system:
10. Marketing arrangement:
11. Information about animal husbandry:

No.:	Type of animal	No. of animals

12. Details about other crops and enterprises around the organic farm:

No.:	Name of crop/ enterprise	Direction from organic farm	Distance around the organic farm?	Are chemicals used if yes, details	Other info

Since when have you been practicing this type of organic farming? Give details.

13. a. I declare that all the above information is correct to the best of my knowledge.
b. I will follow all the organic farming principles and standards.
c. I will practice organic farming with full commitment and honesty.

Date: Signature of organic producer/farmer
Place: Name and Address:

Appendix 6.3.1A

Contract Agreement

This agreement is between organic farming and seed project, Aagar, Supi (the first party) and Mr./Ms. , farmer producing organic crop and produce (the second party) named Mr./Ms.

1. The second party will strictly follow the standards, quality parameters and rules of organic farming as given by Uttaranchal Govt. or the certification agency.
2. The first party will provide complete information, training and technical knowledge and documents about certification.
3. The second party will use, to the extent possible, all household waste, cow dung, and other organic matter on its farm.
4. The second party will attend all the exposure visits, training, workshops, meetings and other such programs from time to time.
5. The organic producer will have to meet EEC regulation No. 2092/99 and Demeter standards.
6. The second party will work as part of the group formed by the first party and will not do anything which may do harm to the other organic farmers' produce or farm.
7. From time –to-time, the second party will get the ICS done and will abide by the decisions of the ICS committee.
8. The first party can cancel the agreement with the second party it is found by the ICS committee or the first party that the second party has violated the norms.
9. The first party will have the first right to procure the organic produce of the second party.
10. The second party will co-operate fully with the internal or external inspectors for the inspection of organic farm, storage, documents, and any other aspect of the inspection.
11. The farm will be considered in conversion period for a minimum of 2 years and a maximum of 3 years from the date of the last use of chemical fertilizers/ pesticides/weedicides (as per certification agency norms)
12. The first party will provide training and demonstration for organic farming.

The first party and the second party agree to the above points.

Date:

Signature
First party/
Project Director
Seal
Organic Producer and Organic Farming,
Agar, Supi

Signature
Second party/
Organic producer

Appendix 6.3.2A
Internal Control system for Organic Farming UOCB/Doc No. 02

ORGANIC FARMER DAILY DIARY
(To be filled by Farmer)

Farmer Name _____ Farmer Code | | | | | | | |

Project Name _____ Farmer Address _____

ORGANIC FARMER DAILY DIARY

Farmers Code : _____

Farmer Name : _____S/o. Mr.: _____

Village & Post: _____ Block: _____

District: _____ State: _____

PIN Code: _____Telephone: _____

Total Land: Organic _____ (HAC) Chemical _____ HAC. /Conventional _____ HAC

Total Plots: _____ Registration Date : _____

(Signature of Farmer) **(Signature of Internal Inspector)**

DETAILS OF BIO-COMPOST

Plot No.	Crop / Variety	Area (Hectare)	Name of compost/ Bio-agent	Source (Made on farm / Purchased from outside)	Address of Seller	Method & Date of Compost Application	Quantity (Quintal)	Total Cost (Rs.)

DETAILS OF SEED

					Seed treatment				
					Treated / Untreated material	Name of seed treating material	Method of seed	Quantity (kg) & address of seller	

DETAILS OF CROP PROTECTION

Plot No.	Crop & Variety	Major Insects-Pest	Name of Pesticide	Source (Self made/purchased from outside)	Address of Seller & Date of Purchase	Quantity of Pesticide (Kg/Ltr)	Date & Method of Application	Total Cost (Rs.)

DETAILS OF PRODUCTION

	Main Crop			Production (Quintal)		Inter/Mix Crop			Production (Quintal)		Details of Consumption (Quintals)					
											Main Crop	Secondary Crop	Main Crop	Secondary Crop	Main Crop	Secondary Crop
											Sale		Self Use		Other Uses	

DETAILS OF AGRICULTURAL TOOLS AND THEIR CLEANING

Plot No.	Crop / Variety	Tool/Equipment Used	Method and Date of Operation	Date and Method of Cleaning

DETAILS OF PACKAGING & STORAGE

			Packaging		Storage		
			Mode of Packaging (Bags/Box/Nag in similar Denomination	Area of Store Room m2	Qty. in (quintals)	Qty. Out (Quintals)	Balance (Quintals)

DETAILS OF LIVESTOCK MANAGEMENT

Category	Number of Animals	Area Available for Animals	Type of Animal Rearing (Free Range / User Shed)	Details of Cattle feed	Source of Feed	Qty .of Feed	Disease	Medicines Used	Cost of Feed (Rs.)

INSPECTION REPORT

				Signature	
				Farmer	**Internal Inspector**

Appendix 6.3.2B

Internal Control system for Organic Farming **UOCB/Doc No. 03**

FARM FILE

(To be filled by Extension Worker)

Farmer Name _____ Farmer Code | | | | | | | |

Project Name _____Farmer Address _____

FARM FILE

Project : _____ Farmer's code : _____

Name of Farmer/In-charge: _____

Village:_____ PO : _____

Block : _____District: _____

State : _____PIN Code: _____

Telephone: _____Date of Registration: _____

Total Area: _____Total number of Plots: _____

Area under Organic farming _____ hectare No. of Plots : _____

Area under chemical farming _____ hectare No. of Plots : _____

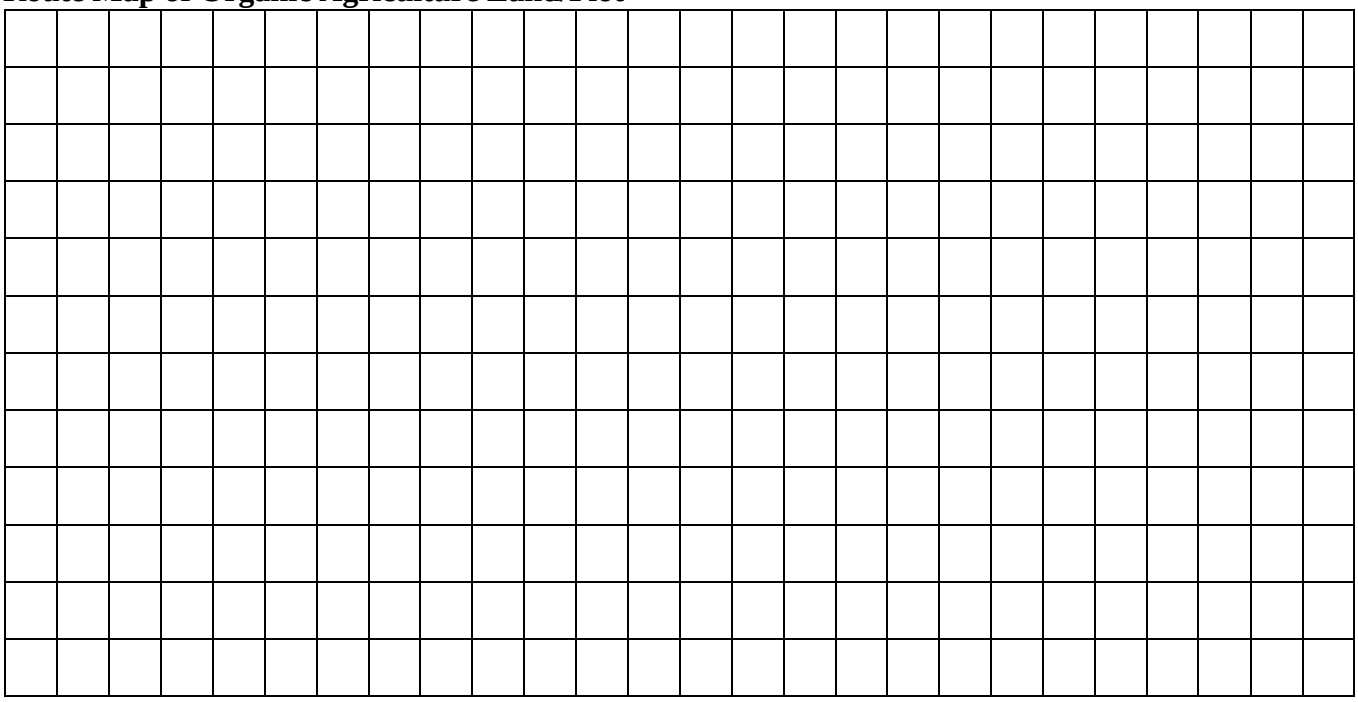
Area under conventional farming_____ hectare No. of Plots : _____

Barren land _____ hectare No. of Plots : _____

Number of persons involved in Agriculture

Male	Female

Route Map of Organic Agriculture Land/Plot



History of cultivation for last three years

		2000-2001			2001-2002			2002-2003		
		Kharif	Rabi	Zaid	Kharif	Rabi	Zaid	Kharif	Rabi	Zaid

Chemical = C Organic = O Conventional =Co Stage = 0, 1, 2 year

Future Cropping Plan

		200 - 200			200 - 200			200 - 200		
		Kharif	Rabi	Zaid	Kharif	Rabi	Zaid	Kharif	Rabi	Zaid

Chemical = C Organic = O Conventional =Co Stage = 0, 1, 2 year

Soil Analysis Report

S.N.	PARAMETERS	Quantity / Ha
1	pH	
2	C:N	
3	Organic Matter	
4	Microbial Population	
5	EC (Electrical Conductivity)	

Element	N	P	K	Ca	Mg	Mn	Zn	Fe
Quantity / Hac								

Note: This page to be filled every year

Irrigation Plan

S.N.	Plot Number	Water Requirement of Crop	Water Availability	Necessary steps to overcome shortfall of irrigation water
1				
2				
3				

Note: This page to be filled for each crop

General Information

Sl. No.	Plot Number						
1	Boundary of Plot						
2	Buffer Zone						
3	Precaution against contamination						
4	Precaution against outside animals						
5	Precaution against natural calamities						

Information of External Farm Inputs

S.N.	Name of bio-compost / innoculam / bio-agent	Date of Purchase	Quantity (Kg/Ltr)	Name and Address of Seller	Amount (Rs)
1					
2					

Note: This page to be filled for each crop

Information of Internal Farm Inputs

Plot No.	Crop / Variety	Date of use	Area (Ha)	Quantity (Qtls)	Main Insect / pest /disease	Measures to control disease and pest	Detail of input	Self made / Purchased

Details of Land Preparation, Irrigation and Tools Used

Plot Number	Area (Ha)	Land Preparation / Date						Source of Irrigation	Tools Used	Cleaning and Maintenance (Date of Clearing

Note: This page to be filled for each crop

Details of Propagating Material **Session:** **Year :**

Plot Number	Area (Ha)	Crop / Variety	Treated Propagated Material (Organic / Chemical)	Source of Propagating Material	Date of Purchase	Quantity (Kgs / number)	Name of treating material

Note: This page to be filled for each crop.

Production Record of Main crop

				Production (Kgs)			Details of Consumption (Kgs)		
				Estimated	Actual		Sale	Self Consumption	Other uses

Note: This page to be filled for each crop.

Production Record of Mixed/Intercrop

				Production (Kgs)			Details of Consumption (Kgs)		
				Estimated	Actual		Sale	Self Consumption	Other uses

Note: This page to be filled for each crop.

Details of Livestock management

Categories	Number	Area under animals M^2	Kind of livestock rearing (Free range / Under Shed)	Details of cattle feed	Medicines / Vaccines given to Animals
• Milky Animal					
Cow					
Buffalo					
• Other Animal					
Ox					
Calf					
• Goat / Sheet					
Sheep					
Goat					
Lamb					
• Poultry					
Hen					
• Other					
Pig					
Horse					
Mule					

Note: This page to be filled every year

Report by Internal Inspector

Sr. No.	Name of Internal Inspector	Date of Internal Inspection / Crop Cycle	Recommendation / Remarks	Signatures of Internal Inspector / Date
1				

Report by External Inspector

Sr. No.	Name of External Inspector & Certification Agency	Date of External Inspection	Recommendation / Remarks	Signatures of External Inspector / Date
1				

Appendix 6.3.3

Tripartite Agreement (on non-judicial Rs. 100 paper)

(free translation from Hindi)

This Agreement ---------- among farmer Federation (hereafter first party), UOCB, Dehradun (hereafter second party) and the T export group, Delhi (hereafter third party), signed today –August, 2004 at Dehradun.

Introduction

I n2002-2003, under DASP, a few selected farmers were brought under the organic basmati production program in Dehradun. On successful completion of the program, it was extended to districts of Dehradun and Udham Singh Nagar in 2003-2004. After the completion of DASP in March, 2004, UOCB is running the organic basmati production program as organic basmati export program.

1. **Adherence to Norms of Farm Production Activity**

1.1 The first party agrees to follow the organic production principles and standards (e.g. EU 2092/91, NPOP, GAP and GMP)
1.2 If the farmer is found to be using any of the chemical inputs during the conversion period, he will have to accept the decision of the second party in this regard.
1.3 The farmer will have to follow all the directions given by the second party in time and as obligatory.
1.4 The second party will not be responsible for any loss to the grower due to the natural calamities like flood, storm, water shortage, etc.
1.5 The farmer will bear all the costs of inputs like seed, inoculam, and other investments. The second party will supply PP bags for the packing of basmati paddy.

2. **Internal Inspection**

1.1. The farmer will complete all documentation relating to organic production in time. If the farmer fails to do so, he will be responsible for any damage he may suffer due to that.
1.2. The farmer will co-operate fully with the field officer/internal inspector/external inspector for any inspection.

3. Supply

3.1. The farm produce will be stored at the selected storage facility at the block level. The farmer will bring the produce at the storage facility at his own cost.
3.2. The produce will be accepted at the storage facility as per the quality parameter (given by the second party). The second party will have the first right to purchase the produce which is lower in quality than the prescribed quality

4. **Sale of Produce and Payment**

4.1. The second party will have the first right to sell the organic taravadi

4.2. The farmer will be paid Rs. 1625/qtl. of organic travadi paddy. The Federation will raise the bill for paddy sold, to the third party immediately.

4.3. The third party will pay for the produce within 30 days of the storage of the produce and its weighing.

4.4. The first party will be paid on the basis of the weighment of the produce at the weigh bridge of the storage centre and as approved by the field officer.

4.5. The second party will pay the first party by bank draft only.

4.6. The first party (Federation) will provide a copy of the organic basmati sales agreement and any other documents to the second party.

4.7. The first party will provide receipt of the payment received to the second party within 15 days of receiving the payment.

5. Duration

5.1. The agreement is valid upto March 31, 2005.

6. Quality parameters

6.1. The grain length should be > 6 mm and the proportion of the length and width should be at least 2.

6.2. It should be at least 5% higher than the other organic basmati rice grains.

6.3. The grains should be only negligibly pest/disease affected.

6.4. The variety grown will be one of those under EEC regulation 2294/2003.

This agreement signed by the undersigned on August 5, 2004.

Chairman	Representative of	Executive secretary
Federation	T Group Export, N Delhi	UOCB, Dehradun

Witness

1.

2.

Appendix 6.3.4

	QUALITY MANAGEMENT Raw Product Specifications	
	FILE- BROWN BASMATI RICE SPECS	
Validity 24.04.0		

Product : Basmati Rice Brown :

Item No.: 106225, -255, -270, -275	Supplier No.: 10340	Origin : India, Pakistan	Certification : IMO

Sensory Assessment :

Colour :	Uniform: max 5% of small discoloruing and max 3% of green rice and , 1% of other rice
Organic Impurities :	Max 0.1% of foreign mater, foreign rice of the same colour but different shape max 5%
Unorganic Impurities :	Max 0.01% but no stones
Smell :	Typical Basmati flavour without any off flavour
Test :	Typical Basmati taste without any foreign taste
Size :	Standard: length > 6mm abd a ratio of length to diameter of at least 2 Weight of 100 kernels of at least 2.0 g.
Broken (<1/10) Damaged (<1/4 rice grain) Insect Damage Rotten	< 2% (by weight) of very fine (<1/10) pieces < 5% by weight No No
Mouldy :	<0.5% of the rice with small dark spots
Pest :	None
General Impression :	Good trading High Quality Rice (Spitzenrets)

2. Contents : (analysis based on present state of technology)

Water content/-activity: < 14% drier kad-Fisher aw. <0.65

Heavy Metals: pb: <0.3 mg/kg Cd: < 0.1 mg/kg Hg. < 0.01 mg/kg

Radioactivity(Cs +Csi) <10mg/kg.

Mycotexture
-Aflatoxine B_1/B_2, G_1/G_2, B1 B2 G1 G2 < lppb $\sum$ <2ppb
-Ochratoxm, Paulin, others < 1ppb

Solubles:
-halogenic, aromatic and
Polygyel Not detectable < 0.01 mg/kg

PAK's light (3-4 rings): < 25 ppb heavy rings ($\geq$ 5 rings): < 5 ppb Benzoapyren <1pph

Plasticizer only traces, which are technically unavoidable

Residues of pesticides + insecticides	Chlothydrocarbon pesticides	Organophosphoric insecticides	Others	Values of concentrate products and dried fruits based on the weight of the fresh product
	<0.01mg/kg.	<0.01 mg/kg.	<0.01 mg/kg.	
Chemicals for water house -SO_2 < 10mg/kg -hydrocyanic < 0.01 mg/kg	- Phosphin - Phyrethrine - Bromid	< 0.005 mg/kg < 0.05 mg/kg < 5.0 mg/kg	-2 polycyclic biphenyles -3 ester of phosphoric acid -4 methylloinid	< 0.01 mg/kg < 0.005 mg/kg < 0.01 mg/kg

3. Physical Requests :		
Negative filling tolerance based on 22 Fertigpackingoverodmz 5 – 50g max, -9% 50 – 100g max, -4.5g 100 – 200g max, -4.5% 200 – 300g max – 9g 300 – 500g max, -3% 500 – 1000g max, -15g 1000 – 10000g max - 15%?		
4. Microbiological Contamination :		
Total count of acrob germs: $<10^4$/g	Yeates	$< 10^3$/g
Coliformes: <100.000/g.	Fungus	$< 10^3$/g
Escherichla Coli n.d. (< 10m/g)	Staphylococcen	n.d.
Salmonellas in 25 g n.d.		
Production/Manufacturing Information :		
Cleaning :	By sieving electric eye	
Ventilation :	With dry air during storage	
Drying :	If necessary at max 45^0C with indirect heated air no smoky smell within the storage	

6. Declaration : The following statements have to be written or printed on the packaging of samples		
Supplier: Yes No	Country of Origin: Yes No	Harvest year: Yes No
Add. Information Packed Rapunzel Naturkost A.G. certified organic content		

Date of Expiry : 18 Months	Declaration: Day Month Year	Remaining date of expiration Good reception: 16 months	Issue of goods: 12 months

Lot number system Nutritional Features: (Pkg. 100g) Should be printed on label: Yes No	From literature	From analysis	Energy value (Determined by supplier)
Fat : Saturated	Not saturated:	Fibers	Protein:
Carbohydrates: Sugar	Heating > 40^0C No Yes		
DATA FOR ALLERGY supplier	Free from gluton, yeast, lactose, protein		

7. Product Labeling + Storage: the packing/boxes must be clean and new or not used and clean. They must be odorless and free of damage or gross external dirt. The transition of the packing materials into the produce must be avoided so far as the present state of science is allowed		
	Packing material : paper bags, pp.bags PVC-free	
	Temperature of storage:	Protective gas :

8. All not mentioned components as well as ecological contamination must be in accordance with the German food legislation and the EC organic legislation 20 92/91. Genetically manipulated organisms and ingredients are not added or used at any time of processing or cultivation.

9. Analysis to which have to be organized by the supplier before shipment	
Quality report	Size, impurities, broken, sensorial data
Pesticides	Once a year
Heavy metals	Once every 5 years of every field/area

Chapter 7
IEEFL: Nucleus-Out-grower Model

Introduction and History

Ion Exchange Enviro Farms Ltd. (IEEFL) is an agri-business subsidiary of Ion Exchange (India) Limited, India's premier environmental and water management company, which holds a 78% equity stake in it. Formed initially as a subsidiary of the Permutit Company, UK, Ion Exchange India became a wholly Indian company in 1985, when Permutit divested their holdings. Today, Ion Exchange India leads the Indian water treatment market, and has established a strong international presence. Headquartered in Mumbai, the company has a countrywide infrastructure of sales offices and production facilities, service companies, dealers, agents and stockists. Overseas too, it is well represented by an extensive network of sales offices, agents and stockists. Ion Exchange (India) Ltd. has specialised in water and waste water treatment for four decades. It is one of few companies worldwide with a complete range of technologies, products and services, enabling it to offer holistic water management solutions to industries, homes and communities, urban and rural. It has over 40,000 installations worldwide, with more than 400 in the core sector. Its plants, ion exchange resins and water treatment chemicals are exported worldwide. In addition to sustained focus on technological advancement through continuous in-house R&D, Ion Exchange India has collaborations with the best specialist water treatment companies internationally with companies from Ireland, France, Sweden, Singapore, Austria, UK, and USA, enabling it to offer leading edge technologies. The company is listed on the Mumbai stock exchange. Its vision is to be leader in its business which is so vital to people's lives and the environment.

Strategic Diversification: Land management through Corporate Farming

Ion Exchange India extended its activities to land management, leveraging its competencies in technology and project management, and its experience in water and environment management, motivated by its concern for people and the environment. Thus, in 1995, Ion Exchange India extended its commercial activities into bio-

intensive organic horticulture through Ion Exchange Enviro Farms Ltd. The organic produce market was growing globally at a healthy 20- 25% annually, with the demand extending beyond commodities to branded and packaged organic products. Besides, water, a potent resource for horticulture, is the business it has specialised for four decades. This strategic diversification into corporate management of agricultural land integrates business objective with corporate responsibility offering:

- Potential for rapid growth, profitability and multiple point value addition
- Management synergy from its core business of total water management by harnessing its four decades' experience in water management - a critical input for agri-horticulture
- Good land use, environmental protection, community development & employment generation

Corporate Farming

In 1995, the setting up of IEEFL extended the objectives of the company to clean food and IEEFL entered horticulture business with a collective investment scheme (CIS). At that time, there were hundreds of companies in plantation schemes mainly in teak, like Maxworth Orchids and Anubhav plantations. IEEFL is the only company to transfer land title to the investors as it was to only manage the farms on behalf of the investors. The sharing of profits from this plantation was to be on 80:20 basis with 80% going to the investors after meeting all expenses. Table 1 gives details of the corporate farms of the company under the CIS.

Table 7.1: Corporate Farms of IEEFL

State	No. of farms	Acreage (acres)
Maharshatra	7	750
Tamilnadu	4	650
Goa	1	100
All	12	1500

Source: IEEFL, 2005.

The land put to CIS was bought from farmers and it was cultivable wasteland. Each farm is in a compact zone in each State and mostly in Konkan region. The land was bought at the rate of Rs. 25-30,000 per acre. There were about 800 participants in the CIS with the largest and the only one with 150 acres and the smallest with 0.5 acres which was the minimum needed as per the company policy. The land was marked with stones and boundaries for the purpose of ownership for each investor. There is a formal agreement with share holders which is renewed every five years. The company is only managing the farms on behalf of the owners who number 900.

Mainly horticultural crops are grown on these farms besides intercrops. The organic bananas (400 MT tones) were sold to NDDB during 1998-2003 for processing into banana puree for export. There were advance orders with 50% advance payment and a premium of 30% on market price for conventional bananas in Jalgaon market. Besides, Re.1/- per kg. was paid as transport cost for delivery at the NDDB factory at Goregaon in Mumbai. The NDDB factory was also certified organic as part of IEEFL's chain of custody with the cost of certification born by the NDDB. Other than selling to the NDDB, the organic produce was sold in the local market as the company was not involved in exports or domestic market in organic produce. Even now, there are no direct exports by the company.

IEEF also outsourced some organic banana for NDDB from Nisarg Sheti Mandal which is now one of the main suppliers of organic produce to the company. The supplies to NDDB have been stopped now due to crash of international prices for banana puree. The CIS still continues though no returns have been given to the investors so far. There is a farm manager for each farm and one assistant for 50 acres each. The labour supply comes from those who sold land to the company and work as casual labour. The manager and the assistant, besides a watchman, stay on the farm.

The farms have been leveled and provided with drip and lift irrigation implemented by Excel and Netafim. All these farms are now totally organic and certified by EcoCert since 1997. The cost of drip installation was Rs. 12,000/- per acre at that time (1995-96). The certification cost for all the farms is Rs. seven lakh p.a. The farms were bought in the name of the directors of the company as agriculturists who were so to begin with, and some employees of the company who were also agriculturists, to

avoid the Land Ceiling Act. There was a ceiling of 12 acres for irrigated land and 54 acres for wasteland. The other shareholders in the scheme to whom the land was to be transferred were made agriculturists by buying 100 acres of wasteland in M.P. as it was already permitted there. This land was bought by the company in the name of investors. The titles of the farms bought in Maharashtra were transferred to these so called agriculturists. In Tamilnadu and Goa, there is no condition of only agriculturists being eligible to purchase land. Though the share price varies across farms and farmers in Maharashtra, it was Rs. 1,30,000/- per acre per share of which Rs. 30,000/- were spent on land development and registration besides maintenance of the land. The gestation period has just got over and now the 80:20 sharing will take place. However the land appreciation has already taken place for the investors. The company also gives gifts of farm or any other organic produce to the investors.

The farm managers of the company have been trained in organic farming by experts. The present supply chain manager is a former employee of Agrocel Industries Ltd.. Since its own farms were in wasteland, it got certification in first years itself. It also provides consultancy for organic farms at the rate of 15% of project cost, excluding land and infrastructure or including them in some cases, so that it has larger base to procure from. It has provided such services to 12 farms in India already and one in Oman. So far as corporate farming is concerned, the cost of production is very high due to the high overheads. The company is continuing as it is only managing the farms in the name of shareholders who are land owners.

Organic Practices

Ion Exchange Enviro Farms Limited (IEEFL) is among the first corporates in India to undertake large scale, bio-intensive organic agri-horticulture. It is equipped with the resources and experience to undertake and consult on large-scale organic farming in India. The company's farms, contract farms, and processing and value addition units are certified for organic production and processing as per European Standards EEC 2092/91by ECOCERT SA & NATURLAND. It is also a recognised organic exporter of Agricultural and Processed Food Products Export Development Authority (APEDA), Ministry of Commerce, a Government of India body and adheres to the National Organic Production Standards formulated by APEDA. It is also one of the

first Indian members of the International Federation of Organic Agriculture Movements (IFOAM), the accrediting agency for organic certifiers worldwide and the worldwide umbrella organisation of the organic agriculture movement. Several of its farms follow bio-dynamic methods of cultivation using organic practices such as crop rotation, recycling through compost and liquid manures, and increasing plant and animal bio-diversity.The company is a member of Demeter International, an agency promoting bio-dynamic farming world over. The organic content of the soil on Enviro farms is augmented using liberal doses of compost/farmyard manure and through cover crops such as daincha, sunhemp and pulses that fix nitrogen in the atmosphere and also provide biomass. Additional nutrient requirements are met through use of neem and various de-oiled vegetable cakes.

Organic Input Business

Leveraging its experience in organic farming, Ion Exchange Enviro Farms Ltd. (IEEFL) has launched a range of organic inputs comprising herbal crop protectors and stimulators, liquid manure and compost, under the ORGANO brand. Further, the company's organic nursery at Bhale has been certified by the Government of Maharastra thereby providing it with an opportunity for sale of organic plants to other farmers and Government institutions.

The company has seven organic inputs which include solid and liquid products and sold through the conventional channel (Appendix 7.1). For these inputs, Eco Cert and NPOP guidelines have been followed. The company supplies inputs to cotton and other high value and input intensive crop groups and 90% of its input sales are in Nasik only in conventional market with only 10% going to organic growers. The IEEFL's product is proving to be *rambaan* for milibug pest in grape. The company recommends open pollinated varieties for organic production. If organic planting material is not available locally, conventional material are allowed by self declaration by the growers to the certification agency. In fact, upto 2005, conventional seed use is allowed by IFOAM but should be non-GMO. It also supplies inputs directly to growers with distributor margin passed on to the groups in some cases in Maharashtra. The company also sells organic inputs in Arunachal Pradesh which has been declared an organic State. Only neem cake and biofertilisers are outsourced by the company.

Procurement – through loose co-ordination

The company works with individual growers, grower groups, grower associations, and even private companies for procurement of produce (Table 7.2). In fact, VOFA, a farmers' association, which is one of the suppliers, also competes with it in the Mumbai market. The community grower groups like Nisarg are more self-evolved group and not organized by the company. The Nisarg group's organic certification was with the company earlier as it paid the certification cost. But now the group pays for it and has the certification. There is no formal agreement with the group and only a 10% premium on market price is paid besides transport cost. The other organic produce can be sold anywhere by the group. The company only supplies inputs, like bio-pesticides for sugarcane, which is manufactured by the company, on credit to the group members.

The pineapple group in Tamilnadu is being assisted by MSSRF and IEEF which has direct contracts with the company and the company pays for their certification even now. In fact, it is the only case of contract farming for the company (Appendix 7.2).

The AIKSS group in Haryana is SKALL certified and managed by Agrocel. The company only procures from this group as and when needed. It has been working with this group since 2000 and all the coordination with the farmers including certification is done by Agrocel. The company purchased 100 MT. tones of basmati rice only once and the arrangement is not very active. The Shreyash group, Nanded also has no formal buyback arrangement with the company and the company procures for the domestic market as and when needed.

The Akhil Bhartiya group in M.P. was certified only by the State Government and therefore, did not meet the certification requirements for domestic or export market. Therefore, the company has moved to Pratibha which also wanted to get an outlet for their non-cotton organic produce. Here also, there is only need based procurement and the Pratibha buys inputs from IEEFL. The produce is procured at 10% premium over the market price. Though the company (Pratibha) had its own organic marketing arm, it has not been able to sell much.

The Emerald farm now pays for its own certification which was earlier paid by company. This group supplied Papaya for NDDB. Here again, there is no formal arrangement and they can sell anywhere. The company quotes a fixed price to the IEEFL which need not be market price based.

The other groups for procurements include Kamyaab Agro for Sesame in Jaipur and another for apple in H.P. where the company has supplied fungicide. Besides, there is Hritika Agro in Jhansi for organic chilies, guava, and pulses (see fig. 7.1. for supply chain).

Procurement Price

The farmers are offered market rate plus premium as the price fixation is from bottom to top i.e. based on farm procurement price on which ultimate buyer or importer prices are based. But, this leads to suppliers dictating terms or not honoring the contract when prices rule high or supply is short. Unless organic price discovery is separate, the pricing problem will continue. But, even intl. market goes by market price plus premium price for organic produce.

When there is poor quality produce, the company does not buy and the farmers have to sell in the open market. The only supply chains problems are matching demand and supply and prices sometimes.

Certification and ICS

Certification is managed by the groups themselves. Initially, the company helped some groups getting certification and even paid for it. The certification cost is Rs. 2 lakh per annum for a group. The company also has its staff for ICS in one of the groups (pineapple) which is under contract with IEEFL and MSSRF where pineapple production is seasonal (for three-four months). In fact, the entire ICS is managed by the company staff as far as production, procurement, and storage is concerned. Only the SHG head helps staff in ICS (Appendix 7.3 and 7.4).

Table 7.2: Major Suppliers of IEEFL

Group/Agency	Main crops	No. of growers	Acreage (acres)	Certification by
1. Nisrag Sheti Mandal, Jalgaon since 1988	Banana, wheat, papaya, jaggery and pulses	55	600	Ecocert
2. Organic Farms (separated from VOFA in 2004)	Vegetables and pluses	-	2000	Ecocert
3. MSSRF and IEEFL SHG, Kolli Hills (Nammakal, Tamilnadu) since 1998 (only case of direct contract farming by IEEFL)	Pineapple (for ITC) and millets	150	600	Ecocert
4. Shreyas Group, Nanded since 2005	Pulses, wheat, soyabean and spices	50	300	NPOP
5. All India Kissan Samaj Samiti (AIKSS), Ladwa, Haryana, since 2000 through Agrocel	Basmati and wheat	35	200	SKAL
6. Gopuri Ashram, SHG, Kudal Sindhudurg, Maharashtra since 1998, has cashew processing unit	Cashewnuts and mango	125	500	Under certification
7. VOFA, Yeotmal, since 1998	Soyabean tur and various grams	-	2000	SKAL

8. Miraj Sheti Mandal Sangli, since 1998	Grapes and resin	10	150	Not certified
9. Amerald Aqua, Jamnagar since 1998	Cumin, chilly, sesame, groundnut, mango (Kesar)	-	100	Ecocert
10. Navrang Biofoods of Pratibha Syntex, Indore since 2005 (earlier it was ABKS, Hoshangaboad since 1998 with 1000 grower and 1000 acres and certified by MP Govt. then and EUREPGAP now, which has been replaced by private company run organic project now)	Soyabeanm gram and wheat (from Pratibha organized contract growers)	2700	22000	SKAL

Source: IEEFL, 2005.

Processing

It has job work contract with flour and pulse mills which are organic certified.

Products

The company sells its products under two brands – Organo World for processed and Organo Fresh for fresh one. The range of products is given below:

ORGANO WORLD

A. CEREALS AND PULSES

- Whole Wheat and Atta (flour)
- Whole Finger Millet and Atta
- Rice - Basmati/Local
- Pulses - Tur, Chana, Urid, Soyabean & Moong in whole and pulses form

B. DRY FRUITS

- Cashew
- Raisin

C. SPICES

- Turmeric
- Chillies
- Black Pepper
- Cummin
- Kokum

D. TEA

- Leaf
- Dust

E. Coffee beans

ORGANO FRESH

FRESH FRUIT

- Mango: *Alphonso, Kesar & South Indian varieties, Totapuri, Neelam, Banganpalli*
- Pineapple: Red Spanish variety
- Banana: Dwarf Cavendish
- Papaya: Taiwan variety
- Pomegranate
- Guava

FRESH VEGETABLES

- Onions
- Tomato
- Potato
- Other green vegetables

All the products are available in retail and bulk packaging.

Distribution and Promotion

The total turnover of the company is Rs. 400 crore of which only Rs. 3 crore is from organic products. Most of the fruits and vegetables which account for 25% of the total turnover are from its own farms. The company sells its organic produce through organic counters in Apna Bazaar, BPCL In & Out outlets at petrol pumps and Big Bazaar in Mumbai and Pune. It has also appointed a distributor in Pune who gets 20% margin. It also supplies to the Khadi Gramudyog Board. The company is into packaging and branding of products only and has no staff for sales at sales counters where the organic produce is sold by the stores on commission basis (20% of MRP). It has also sold pulses worth Rs. 60,000 to Fab India for their Delhi outlet.

It brand names – 'organic fresh' and 'organic world' are for perishable and non-perishable products respectively since 1997. All exports are in bulk without the brand name of the company as it is to bulk importers or exported through third parties. Still, 75% of the total sales of Rs. 3 crore are from exports and 25% from domestic market.

It has linkages with supermarket chains for marketing of produce and had supplied to Osho Ashram, Mahindra International school in Pune. Some of these buyers have gone to original sources (supplying groups) on their own. It also supplies, to Biomiracle in Karnatka, organic ingredients through its distributor in Karnataka. IEEFL is also working with ITC for major orders in fruits like papaya, mango and pomegranate. Major problems in marketing include high prices of products and lack of retail space for organic produce. All of the sales are through these super market outlets besides some sales to staff directly and through some distributors and retailers. But, it has 900 buyers who have invested in farms and 700 employees who will be the

focus of its organic marketing in future. Major problem is repacking the expired products. Thus, sales returns is a major problems in domestic market. Further, some products like atta are low margin but highly perishable.

Domestic Market

These 18 products in 12 categories are available at 17 retail stores, as well as direct marketed through network marketers in Mumbai and Pune.

Agency/Retail Store/Chain	**No. of outlets**
Apana Bazaar, Mumbai	5
Big Bazaar, Mumbai	3
BPCL In & Out, Mumbai	1
Other supermarkets, Mumbai	8

Besides, there is an exclusive company outlet in Navi Mumbai. Figure 1 shows the complete supply chain of IEEFL.

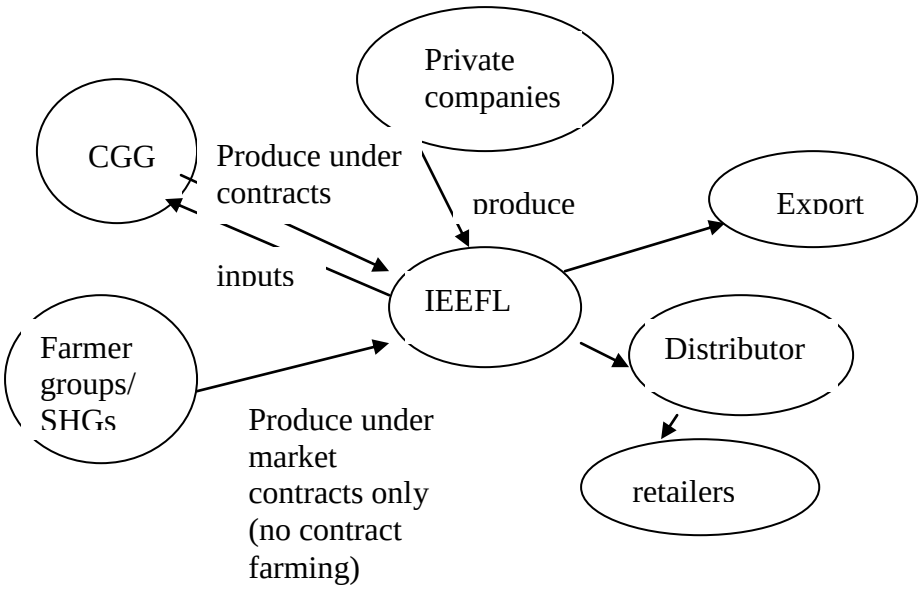


Fig. 7.1: IEEFL supply Chain

A Distributor

Shrusti Products, a distributor of Ion Exchange started in July-2004 and deals in non-certified products of companies other than Ion Exchange also. It deals in sugar, liquid jaggery and brown sugar of Dhampur Sugar Mills, which are not certified. It has also products of Health India Labs based in Chennai. It is promoting direct marketing of organic products by organizing buyers into an organic users club in Pune city with an annual membership fees of Rs. 115. These members number 500 now. Its monthly sales are of the order of Rs. 40,000/- and out of 18% margin, 10% (more than 50%) is passed on to the buyers. It is a one man show and also arranges home delivery provided the order is of minimum of Rs. 500/- The inventory is of the order of Rs. 50,000/- at a time with only 10% being Ion Exchange products. The inventories are low due to the lack of sales, due to high prices of organic products. The major problems include lack of market and promotion, supply sides problem and quality assurance. The company replaces expired products. He has also resorted to selling many other non-organic food and non-food products like oil and water purifiers due to low sales in organic. In fact 95% of the total sales are of oil.

A Retailer

The Organic and Naturals (O&N) has been in organic business since last 3 years. Both the promoters have background in marketing and distribution of agro products. They sell branded organic products of many suppliers like Ion Exchange, and Eco Farm besides selling organic inputs from Organic Farm, Pune and Pitambari Marketing. The buyers of these input include 150 farmers in Maharashtra, Karnataka and Gujarat. The O&N also buys organic produce from these farmers. It also sells non-organic products like oil. Many of the organic products supplied by individual farmers are not certified but now APEDA certification is being sought. It procures in bulk and then cleans packs and sells in its own brand name in retails packs. Its monthly sales are of the order of Rs. 1 lac. The wheat, brown rice and jaggery are fast moving items. It started with monthly sales of Rs. 13,000/- . It procures from farmers at 25% premium over market price and charges 30% margin on procurement price which is the MRP. It gives 10% discount on retail price to the wholesale buyers. They can charge any price as there is no MRP on packs sold to them. It has registered

trademark under the Trademarks Act. It considers Fab India prices to be very high compared to its own. The Eco Farm products i.e. rice and Jaggery are APEDA and NPOP certified. It supplies retails packs to O&N but do not mention certification on the packs. O&N sells vegetables once a week and also grapes and mangoes in season. It promotes its products through exhibition, consumer meets and newspapers advertisements and features. The share of Ion Exchange products in O&N sales is almost Nil now and most of it is from Eco farms. More than 80% of its sales are from home deliveries where there is no extra charge for home delivery. It has a directory of about a thousand organic buyers in Pune, 50% of whom are active (regular) buyers of organic. It distributes green meal, bio-meal and farm meal organic fertilizers of Farm Organic Private Limited.

Strategy

The important thing in organic sales to match products and markets which involves product market and certification dimensions. The product quality depends on agro climatic conditions in the local area and whether it is locally grown or not. The international standards like IFOAM, EU, NOP of US and Japan are mutually compatible. EUROPGAP standards also had a fair trade standards clause.

Franchising is not relevant as due to small volumes nobody will make such large investment in a franchised outlet. The promotional proposals include direct marketing and home delivery, higher farm productivity, transport cost reduction by having suppliers around the market places and decentralized processing and marketing. Direct marketing can help use money saved from margins to distributors, which is now paid to supermarkets (20%), to promote market for organic produce. It required long term commitment for organic market promotion and is viable. Supermarkets should promote organic market as they also get margins for selling. Direct marketing through small outlets or specialty shops can also help.

Appendix -7.1

ION EXCHANGE ENVIRO FARMS LIMITED

PUNE, MAHARASHTRA

PRICE LIST – ORGANO AGRI – INPUTS

EFFECTIVE FROM APRIL-2005

Sr. No.	Products	Pack / Unit	Lot Pkg. Per Case	MRP/Pack Incl. of taxes
1	**Organic Manure**			
A	Organophos			
		50 Kg	1 Bag	300.00
		5 Kg	2 Pkts./Bag	40.00
		1 Kg	10 Pcts.	15.00
B	Organo Vermicon			
		50 Kg	1 Bag	250.00
		5 Kg	2 Pkts./Bag	35.00
		1 Kg	10 Pcts.	12.00
2	**Herbal Crop Protector**			
A	Organo-Crop Surakshak (A)			
		5 Kg	2 Nos.	825.00
		1 Kg	12 Nos.	170.00
		500 Gram	24 Nos.	90.00
		250 Gram	36 Nos.	55.00
B	Organo-Crop Surakshak (P)			
		5 Kg	2 Nos.	775.00
		1 Kg.	12 Nos.	160.00
		500 Gram	24 Nos.	85.00
		250 Gram	36 Nos.	50.00
C	Organo-Crop Surakshak (G)			
		5 Ltr.	2 Nos.	850.00
		1 Ltr.	12 Nos.	175.00
		500 Ml.	18 Nos.	95.00
		250 Ml.	28 Nos.	55.00
3	**Liquid Manure**			
A	Organo Liqui Phos			
		5 Ltr.	2 Nos.	850.00
		1 Ltr.	12 Nos.	175.00
		500 Ml.	18 Nos.	95.00
		250 Ml.	28 Nos.	55.00
B	Organo-Liqui Fert			
		5 Ltr.	2 Nos.	850.00
		1 Ltr.	12 Nos.	175.00
		500 Ml.	18 Nos.	95.00
		250 Ml.	28 Nos.	55.00

TERMS AND CONDITIONS:

1. The above prices are inclusive of all duties and taxes.
2. The prices are subjected to change without notice.
3. No cash transaction, payment only by DD payable at Pune or local cheques.
4. Goods once sold will not be taken back at any condition
5. All disputes are subject to the jurisdiction of Pune courts only.

Appendix -7.2
MEMORANDUM OF UNDERSTANDING WITH CCGs

This Memorandum of Understanding is entered into at _____ on this _____ day of _____ between _____ an informal group having its office at _____ represented herein by its Chairman _____ residing at _____ hereinafter shall mean and include its successors, administrators and assigns of the party of the FIRST PARTY.

AND

Ion Exchange Enviro Farms Limited (IEEFL) having its office at Neeta Towers, Opp: Sandvik Asia Ltd., Mumbai-Pune Road, Pune-411 012 represented herein by its _____ hereinafter called "IEEFL" which term shall mean and include its successors, administrators and assigns of the party of the SECOND PART.

WHEREAS IEEFL is engaged in the business of marketing of organic produce.

WHEREAS ----- is an informal group having their own management team with different farmers as members to cultivate various organic crops including banana.

NOW THIS MEMORANDUM OF UNDERSTANDING WITNESSETH THAT:

1. This agreement commences from _____ and it is valid for a period of ____ years. It is further agreed to renew the contract on mutually agreed terms and conditions.

2. Farmer's members growing _____ crops coming under the jurisdiction of operations has agreed to maintain and cultivate organic ----- as per rules and regulations of organic farming guided by Ion Exchange Enviro Farms Limited.

3. IEEFL will purchase all the crops as per the specified quality produced by the registered farmers from time to time. IEEFL will also agree to purchase in future other commodities produced by _____ as per the agreed terms and conditions.

4. Periodically _____ will provide production estimates so that IEEFL arrange for organic process without any hardships to the suppliers.

5. Payment will be made by IEEFL or through its authorized representative agency to _____ within 15 days after the dispatch of crop by _____ from _____ collection centre or farmer's field.

6. It is also agreed that first party will take the responsibility of proper payment to their farmers further to our payment.

7. Transporting crop from farmgate or collection centre will be done by a transport contractor arranged by First party to whom payment will be made directly by IEEFL through the processor. The person who is coordinating dispatches from _____ will fix up the transportation cost from time to time in consultation with Manager of IEEFL.

8. It is hereby agreed that the minimum required quantity supplied by _____ will be ___ MT in the first year and an average increase of 20% Compound Growth Rate as per the details given below.

Period	Quantity
_____	_____
_____	_____

9. This agreement shall be in all aspects construed and governed in accordance with Indian laws as in force for the time being and will be subject only to the jurisdiction of Civil Courts of Pune to the exclusion of other courts.

IN WITNESES WHEREOF the PARTY OF THE FIRST PART and the SECOND PART has set and subscribed their respective hands on the day, month and year first above written.

_____ **ION EXCHANGE ENVIRO FARMS LTD.**

WITNESSES:

1

2

Appendix -7.3

ION EXCHANGE ENVIRO FARMS LTD.

NEETA TOWERS, 2ND FLOOR
OPP: SANDVIK ASIA, BOMBAY-PUNE ROAD,
DAPODI, PUNE-411012

ORGANIC FARM DIARY

Farmer's Name : _____

No. : _____

Village Name : _____

Dist: : _____

Seasons …….. …….. ……..

ORGANIC FARM DIARY

ION EXCHANGE ENVIRO FARMS LTD.

Tel. 020-7146063, Fax: 7146108

1. Dist : _____
2. Farmer's No. : _____
3. Farmer's Name : _____
4. Address : _____

a) Village No. _____ b) Post office _____

c) Taluka _____

5. Dist. _____
6. Farmer's Signature _____
7. Signature of the representative _____
8. Signature of the representative _____
9. Date _____

Appendix -7.3

To,
ION EXCHANGE ENVIRO FARMS LTD.
Neeta Towers, 2nd Floor,
Opp: Sandvik Asia, Bombay-Pune Road,
Dapodi, Pune – 411012

Farmer Agreement Letter

Dear Sir,
I the undersigned make an agreement with you and declare that:

1. As a farmer, I understand the rules and regulations of organic farming and will follow it honestly. I will sell all the organic agricultural products produced on my farm only through you. I will tender the organic produce of my farm to IEEF. I will attend monthly meeting.

2. I will allow to take the sample of the soil, plant and agricultural produce from my farm. I will allow inspector to inspect my farm and will cooperate with him. I will maintain the book keeping and will allow it to be inspected.

3. As a farmer, I declare that my farm is organic since _____ and I am not using any unallowed chemical fertilizer, insecticides, pesticides, herbicides, or weedicides from _____ on my farm.

4. I understand that only after the inspection and certification of my agricultural produce as organic I will get the price of my organic produce. I will also bear the expenditure, if any. I am ready to pay Rs. 100/- (Rs. one hundred only) as membership fee for every year. Kindly register me as a member.

5. I will label correctly my produce as organic after harvesting and at the time of transporting from farm to home and at the time of transportation from home to collection centre.

6. I will not spray any unallowed material or chemical insecticides in the house where the organic produce will be stored. I will use untreated seed and planting material for sowing or organic seed, if available.

7. I will not contaminate or adulterate my organic produce with any other produce because, I understand that if it is found contaminated/adulterated, I will be disqualified and all the organic farmers alongwith my group in the villages will be disqualified and will suffer ‘great loss’.

8. I will get certified all my agricultural produce as organic only through IEEFL and will not allow any other certification agency to inspect.

9. I. Farmer’s Name :
   II. Address :
   III. Field (survey) No. and Address :
   IV. Total Land Holding Acres :

S.N.	No. of	Area Plots	Banana	Pineapple	Vegetable	Other
1						
2						
3						
4						
5						
6						
7						
8						

I declare that the above information is true and correct.

Yours

Place:_____ _____

Signature of the Farmer

Date: _____ Name: _____

_____

Appendix -7.4

I. CROP SELECTION

SEASON …….

Crop…….

Year	No. of Plots	Banana Acres	Pineapple Acres	Vegetable	Other	Total Acres	Remarks
2001							

Appendix -7.4

II. INPUTS NUTRIENTS (with multiple copies of the proforma for different inputs and seasons)

From which year Organic Farming is continued? Year: _____

S.N.	FYM/Compost and other Organic manure purchase				Date of Purchase	Date of Application of organic Manure		Labour Cost	Remark
	QH	Kg.	Rate/QH	Amount					
1									
2									
Total									

Note:- Please calculate 4 Qts. (400 kg.) of FYM/COMPOST in a bullock cart & 20 Qts. (2000 kgs.) in a tractor trolly.

Appendix -7.4

III PLANTING MATERIALS (multiple pages of the same proforma in farmer diary)

Year: _____

S.N	Crop	Date of Sowing	Seed Rate Per Acre	Total Seeds	Rate of Seeds/Kg.	Total Amount	Source of Seeds	Treated Untreated	Remark
A									
TOTAL									

Appendix -7.4

IV. FARM OPERATION (multiple pages in farmer diary) Year: _____

S.N.	Operation	Date	Total Labour	Labour Cost	Bullock Tractor	Hire Amount	Total Amount	Remark
1.	Cleaning							
2.	Ploughing							
3.	Harrowing							
4.	Sowing							
5.	Hoeing							
6.	Weeding							
Total								

Appendix -7.4

V. PLANT PROTECTION (multiple pages in farm diary)

S.N.	Operation	Date	Cost Rs.	Labour Cost Rs. Ps.	Other Exp.	Total Amount	Remark
1.	Nim Oil						
2.	Tobacco						
3.	NPV						
4.	B.T.K.						
5.	Trichogama						
6.	Others						
7.							
Total							

Appendix -7.4

VI. PRODUCTION ESTIMATE (multiple pages in farm diary)

S.N.	Area under Organic crop Acres	Total expected Yield Qtl.	Date	Qtl..	Total (Qtl.)	Remark
	Mango					
1						
Total						

Appendix -7.4

VII. PRODUCTION DETAILS

S.N.	Crop	Date of Harvest	Total Harvest in Kg.	Remarks
1	Banana			
Total				

Please attach Field map here

Chapter 8

Fab India Organics – Buyer Driven Domestic Market focused Supply Chain

Fabindia is a registered private limited Indian company - Fabindia Overseas Private Limited. Fabindia has a chain of 45 retail stores in India, a store each in Rome-Italy, and Dubai-UAE, a franchise in China, and a US based office, which wholesales a collection of home textiles to various stores across the US. It also offers online sales through its Fabindia website to Australia, Bangladesh, Belgium, Canada, Denmark, England, France, Germany, Greece, HK, Holland, Indonesia, Italy, Japan, Malaysia, Mauritius, Mexico, Nepal, Northern Ireland, Pakistan, Philippines, Portugal, Scotland, Singapore, Spain, Sri Lanka, Switzerland, Taiwan, Thailand, UAE, USA, and Wales. In addition, it sells Indian products to retail and wholesale buyers around the world through its export department based at Fabindia headquarters in New Delhi, India.

Fabindia started as a **wholesale export company** and has since successfully established itself as a major retail player in the Indian market. Corporate houses, resorts, and hotels are serviced through a dedicated Institutional Sales and Marketing team. The company was started by Mr. Bissil after his stint with Ford Foundation due to his interest in handicrafts. In 1958, well before American companies were sourcing from India, John Bissell left his position as a buyer for Macy's New York to work as a consultant for the Ford Foundation in order to develop India's export potential in its emerging textile industry. What Bissell discovered was a village-based industry with a profusion of skills hidden from the world. Determined to showcase Indian handloom textiles while providing equitable employment to traditional artisans, Bissell established Fabindia in 1960 to market the vast and diverse craft traditions of India and to fuse the best aspects of East/West collaboration. Fabindia was founded with the strong belief that there was a need for a vehicle for marketing the vast and diverse craft traditions of India and thereby help fulfill the need to provide and sustain rural employment. The company shifted its focus from export to domestic retail market around mid 1970s as the buyers had started coming to India and the Indian market had also developed by then. Thus, what started as an export house has today become a successful retail business presenting Indian textiles in a variety of natural fibers, and home products including furniture (launched in 2004), lights and lamps, stationery,

home accessories, pottery, cutlery, organic foods and body care products (launched in 2005). It has 90% of its staff made up of women and has also given nominal shares to all its employees which will become valuable once the company goes public.

Fabindia's objective is to create an interest and a market for cottage industries. Its business in textiles and home products is designed to not only provide quality hand-made products to customers, but also to support and encourage the continuation of these Indian traditions by paying a fair price for them. It believes that only Fair trade will sustain these traditions in the long term. Many of the techniques and concepts that are at the foundation of Organic agriculture were learnt from Indian systems. Supporting Organic agriculture is therefore a natural step for Fabindia to take. Just as it supports traditional practices in textiles and other cottage industries, so too does it support agricultural traditions. Its policy of fair trade makes traditional organic farming a viable modern economic option. It believes in giving farmers a fair price for their produce, and in supplying the very highest quality food to our customers. Its major philosophy in business is that the products it promotes should be economically viable to give sustainable livelihoods to the crafts persons.

Fabindia's first retail store opened in New Delhi in 1976 at Greater Kailash with a range of upholstery fabrics, bed linen, durries and home and table linens. By the early eighties, it started producing garments made from handwoven and hand block printed fabrics. retailing of durries, bed linen, and table linen in the domestic market. Now, Mr. William Bissil, son of Mr. Bissil is the M.D. of Fab India. Fabindia does not have a company owned production unit. Its mission has always been to work with village-based artisans across India employing their regional textile skills and specialties. This commitment has helped preserve the traditional crafts of India and created employment opportunities in rural areas. It tries to maximize the handmade process, using hand-woven, handblock-printed fabrics and vegetable dyes as far as possible. If a power loom is used, the fabric is decorated using hand processes such as block printing, embroidery, embellishing, etc. Today, Fabindia buys almost 50% of total production of Ajarakh, Kalamkari and Bagh crafts in India.

It sells through very high 'look-touch-feel' retail stores but does little or no external (off store) promotion. But, it is very business like while working with artisans and its standing instruction for any part of its business or new business is that the return on investment must be about 25% within 2-3 years (Modak, 2006). Its retail stores have, on an average, 150,000 SKUs (Store Keeping Units) and over 3000 SKU are generated every six months in a store.

Its second store in Delhi opened in 1994 followed by one in Bangalore in 1996 and then in Chennai in 1887, two in Mumbai in 1998, in Italy in 1999, and in Pune and Gurgaon each in 2001. Today, it has 12 stores in nine cities and one in Rome and provides employment to 7500 artisans with a staff strength of about 400 (Modak, 2006).

Fab India started organic food business in July 2004 with the GK store in Delhi and has now more than 30 owned stores of which about 20 carry organic foods with 10 of them carrying full range. The major reasons for starting organic food business at Fabindia were:

(i) To extend partnership with rural producers after textiles and handicrafts business;
(ii) Environmental and health concerns, and
(iii) To encourage organic farming movement and market for organic produce.

The major portion of Fabindia's product range is textile based. Non- textile introductions to this range are **Home Products** (introduced in October 2000) and **Organic Food Products** (introduced in July 2004). The textile-based product range includes ready-to-wear garments and **accessories for men**, **women**, **teenagers** and **children**; bed, bath, **table and kitchen linen**; **floor coverings**, **upholstery fabric and curtains**. Cotton, silk, wool, grass, **linen** and jute are the basic fibres used. The Home Products range carries furniture, lighting, stationery, tableware, cane baskets and a selection of **handcrafted utility items**. The Organic Food Products range carries several types of cereals, grains, pulses, spices, sugar, tea, coffee, honey, fruit

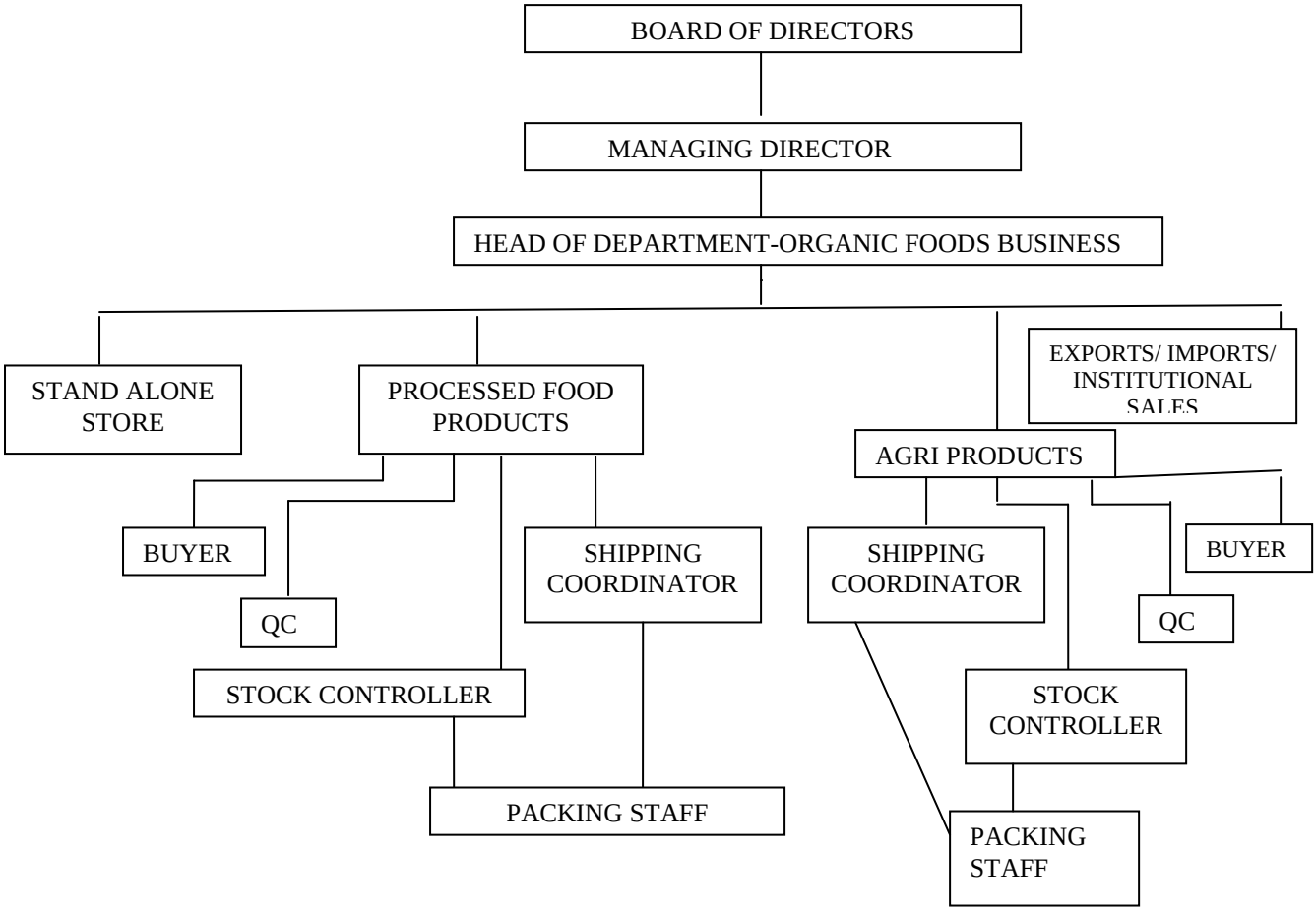
preserves and herbs. Holding these major product lines together is the company's commitment to the rural and crafts sectors of India. Fabindia was awarded "Best Retail Brand" in 2004 by The Economic Times of India.

Fabindia sources its products from over 700 groups which involves 7500 craft persons and artisans across 20 states in India. It supports the craft traditions of India by providing a market and thereby encourages and sustains rural employment. Fabindia works closely with artisans by providing various inputs including design, quality control, access to raw materials and production coordination. The vision continues to be to maximize the hand made element in its products, whether it is handwoven textiles, hand block printing, hand embroidery or handcrafting home products. Fig. 1 shows the organisational structure of Fab India.

The business of Fabindia is 65% garments, 30% home furnishings, which is growing, body care products, and organic food which is less than 1% of its total business. Its sales have grown at the rate of 50% (CAGR) over the last three years. The company is not into organic textiles as it would have worked against its conventional textile market due to the negative perception of conventional in the presence of organic. Also, its presence is not strong in infant and child garments which is a growing market in organic textiles. Since food is an unrelated business to textiles, it does not carry any risk for its textiles business and it is more of an add on business with little additional cost.

The sales of the company are largely domestic market focused with 95% going to domestic market and 5% to export market. It has a total business of Rs. 120 crore of which organics now account for about Rs. 80 lac. The Delhi store sales touch Rs. 1 lac per month each. All the products are sold under the brand name of Fab India organics which is registered trade mark of the company. It has invested close to Rs. one crore to introduce organic foods in its outlets so far. Fabindia has eight staff in its organic division at the managerial level (Fig. 8.1).

Fig. 8.1. Organisational Structure at Fabindia



Its organic food products are classified into three categories:

GREEN: Fully certified Organic farm. No chemicals used for a long time. The product is fully certified by an external accredited organic certifying agency. Along with the log of the certifying agency, there is also the NPOP's India Organic logo.

BLUE: In conversion. No chemicals used. The produce is from farms in conversion for organic certification.

YELLOW: Natural. Farmed naturally without a history of chemical use. Certification process not yet started. Many of our processed foods are also in this category. None of

them contain any synthetic additives, preservatives, colours or flavours. This is launched due to the reluctance of some NGOs as suppliers to go for certification as they do not believe in formal certification and value trust more and do not want to pay for certification. However, Fabindia is of the view that overtime this will be converted into certified organic when sales pick up as there is price incentive for certified organic by Fabindia.

Procurement of products

Its suppliers include besides private companies, NGOs like INHERE. It has no written contracts with any of the suppliers and does not deal in organic inputs but facilitates farmer- supplier interaction for inputs. It does not deal with production related problems at all. The arrangement with the suppliers is only that of procurement. All the coordination with the producers is carried out by the suppliers except in the case of Terai growers. For organic supply chain network of Fabindia, see figure 8.2.

It has direct procurement linkage with only about a dozen growers in Terai region of Utaranchal for the crops of wheat, rice, and turmeric. These farmers have average holdings of 100-120 acres each. Their entire farms or parts of them are certified as per the NPOP standards. They pay for on their own the certification cost for their farms and Fabindia has chain of custody certification by SGS for organic food business. In the case of these farmers, the prices are quotation based and it's a case of unbound loose procurement as and when needed.

Each supplier is product specific, for example Amba Samudram Cashewnuts being supplied by Enfield Agrobase only. Some suppliers pack for Fabindia various products supplier by other suppliers. There are no incentives for better quality as quality is expected anyway.

It has 122 products from 16 suppliers with 220 product packagings (appendix 8.1). These suppliers are certified by six different agencies i.e. IMO, SGS, SKAL, Ecocert, Indocert and Bio-inspecta. The major suppliers include Perry Agro, Iron Exchange, HLL, IITC (Indo Israel Trade Co-operation) Organic India, and Phalada Agro Research Foundation, Bangalore which is an organic input supplier with its famous

compost brand ‘gromin’. IITC Organic India alone accounts for 30-40% of total supplies and along with other major suppliers i.e. Sunrise Pvt. Ltd., Atik (mainly a processor and packer), Malabar, Phalada, Peermade Development Society (PDS), Institute for Himalayan Environment Research and Education (INHERE) and a group from HP, accounts for 80% of all supplies to Fabindia. For the profile of some suppliers and the ICS followed by them, see Appendix 8.3.

Some times, the company also pays advance to the suppliers which can be upto 100% for meeting processing and storage needs of the suppliers and most of the time, products are delivered in package form only. It does not extend any credit to suppliers or growers but is in the process of working it out with involvement of some banks like SBI and ING Vysya. It had an agricultural training department for meeting the training needs of organic suppliers that has been discontinued now.

The payments to the suppliers are generally made on delivery but there have been delayed payments more recently due to larger operations. It has a warehouse in Delhi and only coordinates packaging and valuation activities with suppliers.

The major problems of procurement relate to product quality as organic production is process driven which does not ensure product quality. There is also problem of consistency of quality in supply as different lots may have different taste of the same product, e.g. Jam. Infestation during storage and display for products like rice and meda is also a problem.

Processing and packaging

The company believes in simple packaging but also recognizes the need for product information on packs and their visual appeal (Modak, 2006). It also has a Fruit Products Order (FPO) license to re-pack and label products supplied by various suppliers as they are not manufactured by Fabindia. But, the repacking in the name of Fabindia is done by its supplier either on their own or through a third party. As a policy, the company does not manufacture any products. It only provides designs for products in handloom, and handicraft sector.

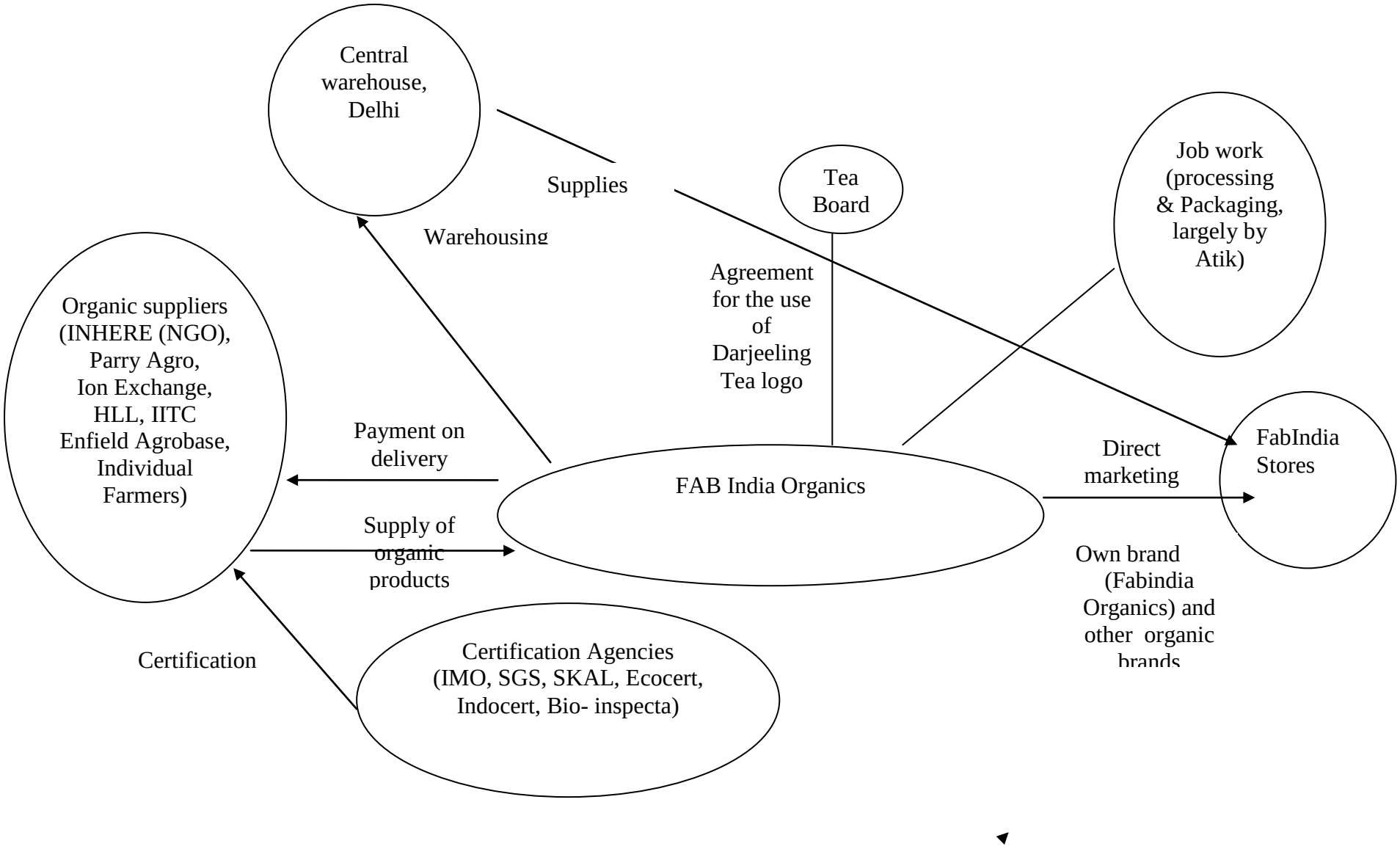


Fig. 8.2: Fab India Organic Supply Network

Pricing

The product prices of the company are based on procurement price and cost with added margins. It is also of the view that basic product prices can not be more than 10-30% higher than the conventional product prices. But, its prices are almost double that of the conventional produce prices in each segment (Appendix 8.2).The major problems in pricing of organic products include high price acting as a barrier, lack of economies of scale e.g. atta (wheat flour) unlike conventional atta, besides the fact that food, unlike textiles, has to be shared with all the people in the household, which dissuades people from buying it at higher price. But since Fabindia has a class of regular and loyal buyers and there are no comparable products at Fabindia, price is not an issue as such. But, overtime, as volume grow, organic food will become a viable business for the company. It is likely to breakeven by next month.

Marketing

It has an agreement with Tea Board for the use of Darjeeling Tea logo. It undertakes direct marketing of organic foods through its website and home delivery of products in Delhi alone. Currently, retail organic food is available in most of the stores in north and west India. It also operates a home delivery system in south Delhi. Its products are not currently available for retail to overseas markets, although bulk export orders are arranged. It is opening one store every month and plans to have 60 stores in organic foods over the next two years. Earlier, the company had store based system of ordering supplies directly which has been centralized in Delhi with a warehouse to avoid fragmented decisions and for better coordination across stores. But the present system is be bereft of personal touch and unable to cater to individual orders and takes time. The company in general, given its clientele base, is quite particular about shop convenience and product display in the store (Modak, 2006).

Ahmedabad outlet

This outlet started selling organic foods on 21st Aug, 2005 and the outlet itself was opened on Feb 11, 2005. It had a very low key opening and launch of organic foods.

This store is under western zone for marketing purposes. Organic products display format is same everywhere. The outlet like other outlets sells only processed foods, not fresh fruits and vegetables. All supplies are from the central warehouse in Delhi and on a weekly basis. The store has one manager, one accountant, one merchandiser, two salespersons, and seven packing boys. The staff is not formally trained in organic sales. Only a manual has been given which has some aspects of organic production and product descriptions. The local manager gives manual based training to her staff and she herself has no background in organics.

It sales are of the order of Rs.4-5,000 per week. The fast moving products include tea with flavours, honey, pickles and conserves, pasta, dalia (course ground split wheat), ragi flour, organic jaggery powder, amaranth (chawli, mixed millet) whereas the slow moving goods are organic herbs and medicines (w/o prescription). The problem is that the full range of organic foods is not there even in Fabindia. The Ahmedabad market is perceived to be very price sensitive especially Gujaratis. Some buyers are repeat buyers. Also, Gujaratis buy in bulk, not retail packs of food items like rice, oil, cereals, or pulses. Also, high prices at the store as per local standards act as a barrier. The sales promotion tools suggested by the outlet to the head office include taster packs (small) free for trial and extra staff for organic as right now, the organic range is being managed/handled by existing staff only who earlier deal with textiles mainly. The store also relies on feedback system to learn from each other across stores. The other organic players in Gujarat are profiled in Appendix 8.4.

Pune outlet

The Fabindia outlet in Pune was set up in December, 2001 and now has total sales of the order of Rs. 40,00,000/- per month. The organic counter was started in July 2005 and has monthly sales of Rs. 25,000/- now. There is only outlet level promotion and brochures besides display of products like other stores of the company. There are repeat buyers at the outlet. The competitors include Organics & Naturals in Shivajinagar and three to four other shops in Goregaon.

Delhi (Vasant Kunj) outlet

The first Fabindia outlet in Delhi was started in 1975. The Vasant Kunj outlet (studied here as a retail outlet) is owned by the company and 12 year old. It is the second largest store after the Greater Kailash (G K) outlet in terms of sales. The monthly sales of organic food from the Vasant Kunj outlet are Rs. 80,000/- to 1,00,000/- per month and total sales of the outlet Rs. 65 lac. This outlet is at par with G K outlet in terms of organic food sales though the G.K. outlet has total sales of more than Rs. one crore. This was the second store after G.K. to start organic food sales. The Vasant Kunj outlet is doing well in organic food sales due to its location in an area which has high proportion of working class people and foreign embassies who are aware of health and food aspects of modern living.

The fast moving items at this store include teas, pasta, turmeric, pickles, jams, honey, tea-masalas, atta (flour) with various flavours like methi (fenugreek), garlic, onion and palak (spinach), and sugar, soyabeans, and ragi atta besides peanut butter most of which are processed and ready to use items besides being attractively packaged. On the other hand, slow moving items include pulses, marmalades, coffee, and brown rice, as they are expensive and bulk consumption items. The movement pattern of textiles and foods is different because textiles are for personal use whereas food is meant for collective consumption in families and groups. The other products at the five-floor Vasant Kunj outlet include furniture, textiles and furnishing. The store has plenty of market orientation as seen from Mahatma Gandhi's quote about customers and staff rules at the outlet. It has also highlighted more recently its connection with Mahatma Gandhi for the promotion of its textile products.

Sales Promotion

Though the company does not believe in advertising its products due to the concern to offer lower cost products, it does carry out sales promotion. It introduced Diwali gift packs of organic food in 2005 though it did not pick up well due to delayed starting of the scheme. The main promotional tools have been in store promotions, brochures and advertisements in local newspaper more recently. The brochure starts with principles

of organic farming, goes on to rationalise Fabindia's entry into organic foods and detail certification procedure and systems followed at the company i.e. green, blue, and yellow labeling of certified, in-conversion, and natural products, It then goes on to answer some frequently asked questions about organic farming and products including GM crops and foods. It also explains the higher cost of organic food as one of the questions. Finally, it compares the organic and conventional foods for their vitamins and minerals content and states that the organic food does not contain some other harmful substances like pesticides and food additives. It also gives pictures of some of the organically produced foods and has a slogan "Fabindia Organics: Healthy food that does not cost the earth".

The planned promotion tools include complimentary free samples of new products and weekly taste campaigns. Compared with the neighboring Navdanya outlet at the same place (Vasant Kunj) which opened only a day before the visit (third week of October), the Fabindia fares better on display, labeling, range of products, and quality, besides being more certified in its product range. For a profile of competition, see Appendix 8.5.

Supply chain problems

The launch of organic food at the outlets has been low key due to lack of supplies. The other supply side problems include lack of coordination, for example, when products are there, there are no labels.

Strategy

The company is looking at introducing more processed products by supplying organic grains to a supplier of natural products at Rudrapur to get them processed into ready to eat products on a job work basis.

The stand alone store would not have been viable compared with the present system of Fabindia where it has been able to have a larger presence in the market at lower cost. It is a case of leveraging Fabindia brand and logistics for organic products. For Fabindia, organic food is an add-on business with little additional cost. But, stand

alone stores for organic food will be viable only when there is a large buyer base or bulk bending of products. Also, bulks sales can help reduce prices.

It has not looked at franchise option for organic food as franchisee may not be able to deliver quality and thus the brand image of the company may suffer. Though it is true that Fabindia outlets are accused of 'Babudom' but they also have their own style and elegance. It is looking at institutional market like schools and hospitals for organic food supplies and has had some inquiries but could not deliver due to lack of supplies.

The company is of the view that organic business is not viable as an exclusive business, but as an add-on business, it has good prospects in both domestic and export market. It has not faced any issues of fair and ethical trade, as it has not exported organic food directly so far but it has been involved in a project ('just tea') supported by FLO and Fakit of Germany for a study on fair trade issues in the Indian market in terms of consumer perception where it is carrying out in-store study in Fabindia stores. The major issues in fair trade are whether it is required and how to use premiums from fair trade.

Organic Supply Chain Challenges

The major challenges in organic produce supply chain include

(i) Lack of quality, consistent supply, stocks and availability. Due to this, the company is not promoting organic food market aggressively as it may not be able to meet the demand due to supply side problems.

(ii) Food is an impulse purchase decision unlike textiles.

(iii) There is large number of people like servants, cooks and maids who buy organic food for the household and the role of the housewife is limited. This creates a gap between the seller and the user. Therefore, home delivery of food is important which is being right now extended only in Delhi. The company is also looking at stand alone stores for food and fresh food and vegetable packs besides activating home delivery.

Appendix 8.1: Product range and Certification of Suppliers of Fabindia

Suppliers	Products	Certification by
Atik	Assam Valley CTC Tea, Besan, Black Pepper, Blue Mountain Oregano, Blue Mountain Rosemary, Blue Mountain Thyme, Broken Grain Porridge, Desiccated Coconut, Dry Ginger, Kodaikanal Special Coffee, Mustard Seed, Rock Salt, Split Black gram, Split Chick Pea, Sweet Basil, Turmeric	Chain of Custody (CoC) by SGS
IITC, Organic India	Aniseed, Coriander Powder, Mace, Maize flour, Nutmeg, Green Cardamom, Amalaki, Ashwagandha, Brahimi, Breath Free, Flexibility, Sugar Balance, Triphala, Tulsi Tea Masala, Tusi Tea Darjeeling,	SGS
HLL	Blue Mountain Premium Tea, Black Mountain Special Tea, Blue Mountain TGBOP Tea,	IMO
Phalada	Cauvery Basin Special Cloves, Coorg Black Pepper, Coorg Cardamom, Coorg Peppermint, Coorg White Pepper, Coorg dehydrated pepper, Mercara Roasted Coffee Beans Mild, Mercara Special Filter Coffee	SKAL
Parry Agro Industries	Annamalai BOP Tea, Annamalai BOPF Tea, Annamalai Super Strong Tea, Annamalai Whole Leaf tea	IMO
INHERE	Ragi flour, Amarnth flour, Kulath flour, Soya Bean flour, Red Chilly Whole, Kulath dal, Black soyabean, Black Soyabean flour, Yellow chilly powder	SKAL
Cee-Daa* (Kavita Grewal)	Yellow mustard powder, Roasted dalia, Methi flour, Garlic chives flour, Turmeric powder special, Special turmeric powder	INDOCERT
Ion Exchange	Whole black chickpea, Cumin Whole,	ECOCERT
Enfield Agrobase	Ambasamudram cashew nuts, Dindigul rice flour, Dindigul Special Rice, Rice Flakes, Rice Rava, Tirunelveli Boiled Rice	IMO
Uttranchal Organic Commodities Board	Kidney beans	SKAL
Tata Tea	Munnar BOP Tea,Munnar BOPF Tea,Munnar Dust Tea	IMO
Grewal Farms	Organic Brown Sugar,Organic Sugar	SGS
Maikaal bioRe	Whole Wheat Flour	BIO INSPECTA
Kashmir Walnuts	Premium Kashmiri Walnuts	SKAL
Dev Bhumi	Rudraprayag Special Honey	SGS
Farm Fresh Foods	Special Brown Rice,Himachal Red Rice	SKAL
Sun Rise Pvt. Ltd.	Whole Brown Chickpea,Maida,Suji,Whole Green Gram	SGS
* All Products are under in-conversion		

Appendix 8.2: Fabindia Prices							
Cereals		**Pulses**		**Spices**		**Beverage**	
Quantity for all: one Kg.	MRP	Quantity for all: one Kg.	MRP	Product (Quantity)	MRP	Product (Quantity)	MRP
Kulath Flour	75.00	Besan	70.00	Turmeric (250 gm)	15.00	Coffee Merc Filter (150 gm)	100.00
Flour maize	60.00	Black Chana	85.00	Ginger(250 gm)	27.00	Tea Assam Valley(150g)	85.00
Maida	45.00	Chick Pea Whole	90.00	Black Pepper (100 gm)	55.00	Tea Anna Leaf(150gm)	45.00
Ragi	55.00	Dal Chick Pea	85.00	Aniseed (100g)	35.00	Makai Darj Black Tea(100g)	135.00
Flour Rice Dindi	60.00	Dal Moong Dhuli	85.00	Black Pepper Coorg (100gm)	50.00	Tea Munnar Dust (150gm)	50.00
Suji	45.00	Dal Moong Green	85.00	Coriander Powder (100g)	50.00	Sycotta Darj Black Tea(100g)	175.00
Whole Wheat Flour	35.00	Dal Moong Whole	85.00	Chilli Powder Mad(100 gm)	55.00	Tulsi Chai Masala (100gm)	130.00
Porridge(Dalia)	60.00	Dal Tur	85.00	Ginger Powder (100 gm)	55.00	Tulsi Tea Darjling (100gm)	130.00
Rice Indus Basmati	105.00	Dal Urad Chilka	75.00	Methi Seed (100 gm)	20.00	Tulsi Tea Ginger (100gm)	120.00
Rice Punjabi Basmati	90.00	Dal Urad Dhuli	85.00	Rai (mustard seeds) (100 gm)	20.00	Tulsi Tea Green (100gm)	130.00
Rice Rawa	75.00	Dal Urad Whole	75.00	Red Chilli whole (100 gm)	30.00	Tulsi Tea Original(100g)	120.00
Rice Red Himachal	80.00	Green Chana	85.00	Rock Salt (100 gm)	30.00	**Fruits (450 Gms.)**	
Rice Sirmor Basmati	85.00	Dal Kulath	65.00	Turmeric Powder (100 gm)	45.00	Strawberry	125.00
Special Brown Rice	95.00	Kidney Beans	85.00	Yellow Chilli Powder(100 gm)	30.00	Black Cherry	150.00
Black Soyabean Flour	75.00	**Dry Fruit**		**Vegetables**		Black Grape	125.00
Methi atta	75.00	Raisin (100 gm)	50.00	Potatoes(1 kg)	16.00	Mango	125.00

Appendix 8.3

Some Suppliers of Fabindia Organics

Enfield Agrobase

It is a multi-product organic farm setup in 1994 in southern India with technical know-how from Europe. A variety of crops such as cashew, mango, banana, sugarcane, rice, sesame, spices and herbs are cultivated in Enfield Agro's certified organic farmlands, and processed in-house at the company's own processing and packaging plants. Enfield Agro caters to a global clientele, spanning Hongkong in the east to Europe and the US in the west. The company's association with the International Federation of Organic Agriculture Movements (IFOAM) enables Enfield Agro to stay at the leading edge, with the latest technologies and trends in organic farming. The entire farmland is drip irrigated and rainwater is harvested through check dams and several ponds created at vantage locations. In addition to application of farmyard manure produced in-house, the company systematically applies BD 500 bio-dynamic fertilizer, Vermi-compost, Neem cakes and oil cakes produced under strictly certified organic processes. The company has banned any synthetic chemical in its farm and has successfully developed bio-pesticide to prevent and counter pest attacks. The company has a strong in-house research wing that explores improvements in areas of plant nutrition and plant protection and all other vital inputs to guarantee purity and taste to its value added products.

Complementing agricultural farming methods, Enfield Agro uses environment-friendly technology to speed up processing as well. A fruit processing unit running on solar energy, an oil extraction unit (imported from Germany) using the "cold-pressed" method and a state-of-the-art cashew processing unit are some of the in-house facilities. Enfield Agro's commitment to the environment has enabled the company to maintain organic certification continuously since its inception. The organic certification of Enfield Agrobase is carried out by the world-renowned certification agency Institut Für Marktökologie (IMO) Switzerland. Its produce range includes: cashew nuts, coconut oil, groundnut, jaggery, rice flakes, rice flour, rice rava, semi polished rice, par boiled rice, fresh mango, dehydrated mango, dehydrated banana, dairy products, and peanut candy.

Atik Private Limited

Atik Private Limited incorporated in 1981, diversified into the field of processing and exports of certified organic produce such as Sesame seeds, Fruit Pulps, Dehydrated Fruits, Herbs, and lentils from India to the European market in the year 1999. The company works with a network of certified organic farms to deliver fresh and seasonal produce to its valued customers. The entire product development process, right from growing to processing to labeling is certified by an SGS (Product & Process Certification) under Regulation (EEC) No. 2092/91.

Atik Organics also promotes marketing of certified organic agricultural produce from farms run by NGOs, for exports as well as the domestic retail market. The company's own retail brand of certified organic produce "ORGANECO" is the first consolidated organic food brand to be launched in India and presently consists of over 40 products

grown within the country. It also has another brand 'Atik Organics' for export market. All Indian products are sourced from different parts of the country, cleaned, graded, packed and labeled at the company's unit under strict organic guidelines. It is also manufacturer and exporter of Sesame seeds, Peanuts; Fruit pulp (banana, mango, pineapple, papaya); Dehydrated fruits; Coffee- green & roasted; Ginger; Soybeans; Rice; Pepper; Honey (Wildflower); All lentils; Kidney beans; Chick pea; Jaggery, Turmeric Powder, Turmeric sticks, Flour (Wheat, rice, soyabean); Herbs; Neem products; Processed Candy; Soya cakes; and Cotton Cakes (for animal feed). All products are certified organic.

INHERE

The Institute of Himalayan Environmental Research and Education (INHERE) has been working in Uttaranchal since 1982 as a non-political, secular, non-government development organization for all round development of the people of the Himalayas. Its vision is a people centred sustainable process of development based on security, equity and harmony in society with equal opportunity and participation of women and men. Its mission is to work for exploring, supporting, and providing opportunities for a better quality of life to socially deprived and economically marginalized mountain people, especially women of the Uttaranchal Himalayas. Its area of work includes environment, food and livelihood security, basic social infrastructure, human resource development and advocacy. It works through community organizations by using local resources and encouraging entrepreneurship skills in the poor, especially women (Annual Report, 2003-04). Its major activities in terms of budget allocation are: NRM, agriculture and animal husbandry, and institutional infrastructure development which respectively take 60%, 12% and 10% of the funds. Its major funding partners include ICEF (India-Canada Environment Facility, New Delhi), SDTT, Mumbai, KZE, Germany, Simavi, The Netherlands, DASP, Uttaranchal, KFO, Austria and IDRC New Delhi besides IGSSS New Delhi and Dewan Foundation, UK (Annual report, 2003-04). INHERE has its main administrative office in Masi, Tehsil Bhikiasain, District Almora. It has two campuses with programme offices and training facilities at Ranikhet and Chamoli. At present INHERE has four field offices in different parts of the district. INHERE also has a branch office in Delhi. The two campuses of INHERE house two well equipped training centers with dormitory, transport and mess facilities and rooms for resource persons.

During 2003-04, INHERE set up the ICS for organic farming and obtained organic certification for 1248 farmers of 42 villages (Almora District) from SKAL international (a Netherlands based international organic certification agency). It has also set up a central food processing unit for processing fruits and vegetables for value addition to local produce. It also promoted 603 units of biodynamic, vermi and NADEP compost in 48 villages across 523 participants during 2003-04. During this year, the SHGs and farmer groups collected 55 quintals of organic produce of cereals, pulses, and spices and marketed in exhibitions in Delhi and Nainital (Annual Report, 2003-04). Certification cost (Rs. 180/ hectare) for the group is paid on behalf of the farmers for first two years by INHERE and some deduction is made for certification costs for the third and later years. Cluster approach is being followed for certification.

INHERE started its organic operations in 2000. Before this it worked with U.P. DASP. It has been practicing chemical free farming since 1990 with its groups and

got it certified since 2002. It has paid staff strength of 62 besides 31 volunteers (Annual report, 2003-04). It has only one outlet for selling the organic produce which is located at the processing factory site (Masi).

INHERE works with 2269 organic growers across 80 villages in 3 districts of Utaranchal i.e. Almora, Chamoli and Pauri Garhwal. Out of the total of 350 SHGs, 160 are organic farming groups who put 1013.7 acres under organic production with the major crops being pulses, millets, while and black soya and fruits and vegetables. Its organic operations are certified by SKAL as a group. The average size of holding of organic growers is 0.5 acres. As leased in land is not allowed under certification, there is no leasing enough land for organic production. On an average each village has one or two organic groups. The area is largely un-irrigated. The 350 SHGs have total savings of Rs. 30 lac now and they have a cluster level federation of these groups. The federation is being now registered as a non-profit society for processing of organic produce under KVIC as INHERE Ajivika Uthan Smiti. Right now the organic products are processed and packaged by the Utaranchal Agro Food promotion which is a project of INHERE. The individual farmers have an agreement with INHERE for certification of their farms where they state the last use of chemical inputs and give five year history of the farm. The certificate is provided to INHERE by SKAL. Most of the input like CPP, Cow urine, vermin compose, BD 500, and various bio-pesticides are locally made by the farmers and the group. INHERE has five acre farm for seed production and experimentation which is also certified by SKAL. The seeds are collected from the local farmers to be distributed for organic production.

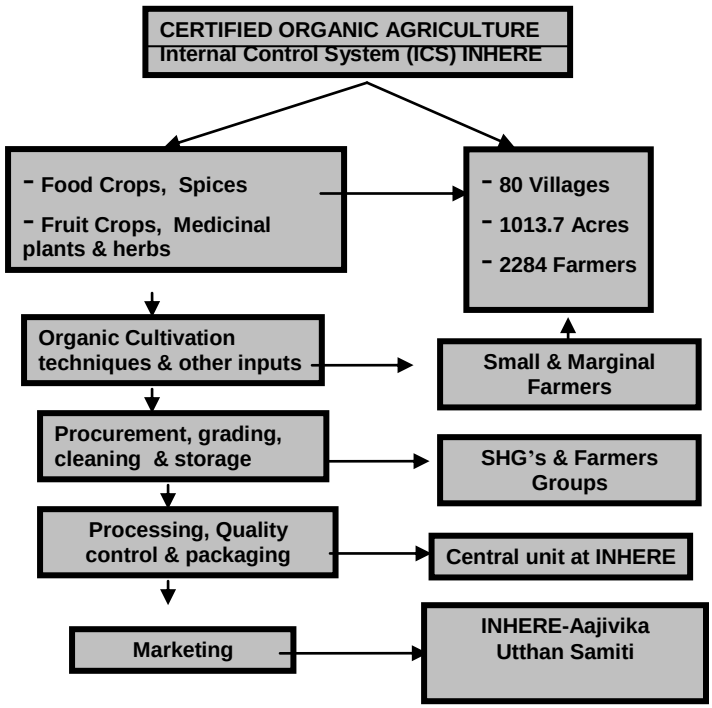
The contract price is not mentioned in the agreement and seed is supplied at 50% subsidy or full price depending on the area and the farmer. The NGO pays 35% to 45% premium on organic produce purchased compared with local market price of conventional produce and payments are made in cash. The other inputs need of the members are made by the SHGs who have cash credit limits with local branches of the SBI and Canara Bank. Some of the groups and individuals procure on behalf of INHERE which pays them commission as incentive as the volumes at the local level are very small for example honey where the collector is given 5% margin. The organic production agreement wit the growers is renewed annually as per the certification requirements.

Major problems in organic procurement are small volumes and maintenance of quality of produce. Typically a 250 gram bottle of Jam which has an MRP of Rs. 65/- including 7.5% margin of INHERE has 50% of it as production and processing cost. At this price (Rs. 32.5) it is supplied to Fab India. Of the MRP, 85% product and marketing cost and the remaining 15% margin for Fab India. There is no formal agreement of purchase with Fab India. It is only order based as and when needed and available. But Fab India orders have been increasing in a geometrical progression. Since farmers supply is based small, there is no definite market arrangement with the buyers. Some of the buyers also wanted to buy and sell in their own brands which was not agree to buy the NGO which has its own brand card Himalian fresh since 2004 and registered under FPO and certified by SKAL.

Besides the certified number of farmers, there are another 1000 farmers either in the year one or year two of conversion. Only 2% to 3% farmers lose their certification due to product taste every year. Last year INHERE did business of Rs. 10 lac in

organic foods, 50% of which was brought by Fab India and repacked and sold with the rest been sold by the NGO itself. INHERE also meets certification costs of the farmers from a promotional fund but increasingly farmers are being asked to pay the certification cost, which is of the order of 1.3 lac rupees annually for the NGO. Certification is based on a sample of 33% of growers every year and the per acre cost works out to be about Rs. 100/- The annual cost of certification is same for various years like in conversion or certified organic. The NGO has an ICS managed by its professional employees. It has no export so far and would like to focus on domestic market. Its processing plant cost Rs. 6 lac which is being seen as a model for application in other places. It also participates in exhibition and food fair to market its products. There is no field level pick up of produce. Farmers labour the produce in INHERE centers on their own. Some times farmers also being semi-processed materials to cut down cost of procurement. This is one of the strategies for cross cutting alongwith procurement by local and entrepreneurs and opening of local procurement centers by NGO. Besides Fab India, it has linkage with many other NGOs. It is also selling to a local hotel and resorts group in Utaranchal. Besides it is also exploring its other outlets for its product like 24 letter mantra as it believes that organic production and marketing is viable as the market is growing.

Fig: 8.31: INHERE Uttaranchal Organic Project Structure



Source: Bisht (2005).

Appendix 8.3.1
INSPECTION SCHEDULE AND FORMATS FOR ICS

ICS of INHERE on Organic certification process follows the following procedure for inspection of organic villages:

Dates for Farm Visits by Field Officers:

Crop Stages	**Rabi**	**Kharif**
Sowing	1 Nov. – 10 Nov.	1 May – 10 May
Flowering	20 Jan. – 30 Jan.	1 Aug. – 10 Aug.
Harvesting	10 Apr. – 20 Apr.	25 Sept.– 5 Aug.

Major Points of discussion and inspection for Field Officers:

- **Sowing Stage**

  -Meetings and discussion with farmers on:

  Source of seed – Own/Local/Other (to specify)

  - Procedure adopted crop wise in sowing
  - Manure used at the time of land preparation
  - Quantity of seed use crop wise

  -Inspection:

  - House hold and farm visit
  - Nature of Manure used in the field
  - Leveling and Bunding of fields
  - Visit local shopkeeper for sale of any fertilizer or chemical.

- **Flowering Stage:**

  -Dialogue/discussion:

  - Any damage of crop insect-pests. If yes, nature and extent of damage.
  - Control measures for Insect pests and dieses
  - Weed control measures

  -Inspection:

  - Crop differences indicating use of different substances
  - Estimation of crop-good /average/poor
  - Measures adopted for insect – pest and disease control by farmers
  - Cross checking with other farmers and look for indications through smells.
  - Organic measures/No measures/other measures taken.

- **Harvesting Stage:**
  -Meeting

  - Estimation of crop yield
  - Measures for processing and storage

  -Inspection:

  - Inspection of house hold places of storage on random basis
  - Containers or articles use for storage
  - Containers/Jute Bags/local methods/other used bags/socks
  - Method of cartage/transportation

Appendix 8.3.2

Reporting format for Field Officer at INHERE

Visiting period – Rabi / Kharif

Crop Stage: Sowing time _____

Flowering time_____

Harvesting time_____

1. Name of Field Officer: _____
2. Zone of Field Officer: _____

Sr. No.	Name of village	Date of Visit	Important Points of village visit
1.			

Signature of Field Officer

Note: If required attach a separate sheet for details.

- Field Officer must submit his village visit report to his concerning Field Coordinator on the following dates.

	Rabi	**Kharif**
Sowing	by 12 Nov.	by 12 May
Flowering	by 2 Feb.	by 12 Aug.
Harvesting	by 22 Apr.	by 7 Oct.

Appendix 3.3

INHERE Reporting Format for Field Coordinator:

Visiting period – Rabi / Kharif

Crop Stage: Sowing time _____

Flowering time_____

Harvesting time_____

1. Name of Field Coordinator: _____
2. Zone of Coordinator: _____

Sr. No.	Name of village	Cross confirmation of Date of Visit by FO	Field Officer's Name	Cross confirmation of main points of visits of FO
1				
12				

Signature of Field Coordinator

Note: Separate sheet may be attached if necessary for specific information.

- **Dates of Report Submission by Field Coordinator**

	Rabi	**Khariff**
Sowing	by 15 Nov.	by 15 May
Flowering	by 5 Feb.	by 16 Aug.
Harvesting	by 25 Apr.	by 10 Oct.

Appendix 8.3.3

INHERE Reporting Format for Internal Controller:

Sr. No.	Name of Field Coordinator	Name of Field Officer	Name of village	Village Code	Date of Visit	Important Points of village visits
1						

Signature of IC

If any contaminations found/suspected, then note

- Area of concern
- Point of action
- Action taken

Area of Concern:

In case of any deviation found from the norms of certifying agency, demarcate the area; name the farmer in field officers diary and also in central record system.

Point of Action: Following points should be taken in consideration.

- Revisit field history
- Cross discussion
- Revisit of house holds
- Field soil sample if necessary

Action Taken: In case of default

- Identified farm may be treated as in conversion
- A fresh agreement may be signed by the farmer with the promise not to repeat the mistake
- History of three mistakes will lead to expulsion.

Appendix 8.3.4

Some Additional Field Internal Inspection Points at INHERE

Name of Field Officer: Name of village:

Inspection Points:

1. **Field Boundaries / Patch Boundaries:**

   - Risk of leaching from conventional farms/contamination.
   - Risk of spray drift from conventional farms/others sources.
   - River/Mountain/roads/Live Hedge/forest forming the boundary.

   Remarks _____

2. **Seed Material:**

   - Farmers saved seed material.
   - Seed material taken from other organic farmers.
   - Fertilizers/pest control agents use while planting.

   Remarks _____

3. **Soil Fertility Management:**

   - Compost or Manure from farmers own/others sources.
   - Others fertilizer/manures if applied.
   - Other brought inputs.
   - Soil & Water conservation measures leveling/bunding.

   Remarks _____

4. **Pest and Disease Management**

   - Resistant/adapted/local varieties
   - Cultural practices for weeding
   - Biological control.
   - Others Methods using External inputs.

   Remarks _____

5. **Processing :**

   - Cleaning/grading
   - Boiling
   - Drying/Sun Drying

   Remarks _____

6. **Storage :**

   - Bags/containers
   - Store rooms
   - Use of any chemical for storage

   Remarks _____

7. **Transportation**

   - Mode
   - Packaging
   - Loading

   Remarks _____

8. **Book Keeping**

   - Field Officer's Diary
   - Receipts from store keeper
   - Others

   Remarks _____

9. **Others remarks, if any**

   Findings _____
   _____
   _____

Field officers signatures Date

INHERE ICS office use only

Complies with INHERE-ICS internal Regulation Yes No

Remark/Action to be taken

_____

_____

_____

_____

Internal controller **Date: _____**

Appendix 8.3.5
INHERE Farmer Agreement for certification

Name Skal-licensee			
Address Skal-Licensee			
Skal licensee number		Country	
Name field Officer (if any)			
Name and number unit			
Name farmer			
Code/number farmer			
Address farmer			

1. I as farmer declare that I understand the international standards like the EC-Regulation 2092/91, Skal standards of IFOAM basic-standards for organic agriculture of which the most important aspects are:
   - no use of unallowed substances like artificial fertilizer or chemicals like herbicides, pesticides, insecticides, fungicides.
   - Maintenance and improvement of soil fertility by an appropriate crop rotation, use of animal excrements, green-manure and cultivation of legumes.
   - Control pests and diseases by natural ways and control weeds by hand or mechanically.
   - Use of untreated and when available organic propagation material.
   - Avoid contamination of fields and products with unallowed substances.
   - Label the certified products correctly as organic or under conversion to organic.
2. I declare that I work on my fields included into the inspection-programme and during the on-farm first processing of products, conform the above mentioned international standards for organic production.
3. I will allow Skal-inspectors access to all my fields and premises for inspection purposes and I will fully cooperate with them.
4. Only if no farmer group; I declare that
   - Detailed map of the fields is maintained.
   - Adequate written bookkeeping of all incoming and outgoing products is available.
5. In case of non-compliance with the above mentioned standards, I will inform the above mentioned field officer and/or Skal licensee, and I will not sell the products as organic or under conversion to organic.

Date and signature of Farmer	
Date and signature of Field Officer (if any)	

Appendix -8.3.6 Field History	Licensee Unit No.		Date:

Units

No.	Area (acres, or hectares)	**In conversion**				
		Starting date conversion period	Fertilizers	Last date of using	Chemicals	Last date of using

Appendix -8.3.7 Field Specification	Licensee No.		Year:

No.	Area (acres of hectares	Crop	Variety	Growing cycle seeds / plants			Inspector	Status on moment of harvest**	Yield (Kilo per hectare or acre	Inspector
				Quantity (Kilo, number per hectare or acre	Date of Planting/sowing	Harvest time				
								Co/ic/org		
								Co/ic/org		
								Co/ic/org		
								Co/ic/org		
								Co/ic/org		
								Co/ic/org		

Note: Grey columns have to be filled in by the inspector during the inspection
*Status: Co: conventional, ic: in-conversion, org: organic

Appendix 8.3.8
INHERE's PROCESSED FOOD PRODUCTS
List of certified & other ingredients of Food Products

Sl.	Name of Product	Certified Ingredient (Per Kg.)	Weight%
(A)	Pickle:	Mango 100 gm.	66.44
1	Mango	Lime Juice 250 gm.	16.61
		Mustard Oil 125 gm.*	8.30
		Chilly 30 gm.	1.99
		Mustard 25 gm.	1.66
		Fenugreek 20 gm.*	1.32
		Coriander 10 gm.*	0.66
		Citric Acid 10 gm.+	0.66
		Turmeric 3 gm.	0.19
		Black Cumin 1 gm.	0.07
		Other Ingredient	**2.1**
	Total		**100%**
2.	Green Chilly	Chilly 1000 gm.	66.44
		Lime Juice 250 gm.	16.61
		Mustard Oil 125 gm.*	8.31
		Rai (Mustard Seeds) 40 gm.	2.66
		Fenugreek 25 gm.*	1.66
		Citric Acid 20 gm.+	1.33
		Coriander 10 gm.*	0.66
		Turmeric 4 gm.	0.26
		Other Ingredient	**2.08**
	Total		**100%**
3	Lemon	Lemon 1000 gm.	67.93
		Lime Juice 210 gm.	14.26
		Mustard Oil 125 gm.*	8.49
		Chilly 30 gm*	2.04
		Fenugreek 15 gm.*	1.02
		Coriander 15 gm.*	1.02
		Turmeric 3 gm.	0.21
		Citric Acid 02 gm.+	0.13
		Other Ingredient	**4.8**
	Total		**100%**
4	Ginger	Ginger 100 gm.	68.12
		Lime Juice 200 gm.	13.62
		Mustard Oil 125 gm.*	8.54
		Chilly 30 gm.	2.04
		Rai (Mustard Seeds) 20 gm.*	1.36
		Fenugreek 20 gm.*	1.36
		Citric Acid 20 gm.+	1.36
		Coriander 10 gm.*	0.68
		Turmeric 3 gm.	0.2
		Other Ingredient	**2.72**
	Total		**100%**
5.	Garlic	Garlic 1000 gm.	67.52
		Lime Juice 200 gm.	13.5
		Mustard Oil 150 gm.	10.12
		Hilly 40 gm.	2.73
		Citric Acid 20 gm.+	1.35
		Fenugreek 15 gm.*	1.01
		Coriander 10 gm.*	0.67
		Turmeric 3 gm.	0.2
		Other Ingredient	**2.9**
	Total		**100%**

6.	Garlic + Ginger	Garlic 500 gm.	35.21
		Ginger 500 gm.	35.21
		Lime Juice 200 m.	14.08
		Mustard Oil 125 gm.*	8.83
		Chilly 40 gm.	2.81
		Citric Acid 20 gm.+	1.4
		Fenugreek 10 gm.*	0.7
		Coriander 5 gm.*	0.35
		Turmeric 3 gm.	0.21
		Other Ingredient	**1.2**
	Total		**100%**
7.	Green Chilly + Ginger	Green Chilly 500 gm.	34.23
		Ginger 500 gm.	34.23
		Lime Juice 200 gm.	13.69
		Mustard Oil 125 gm.	8.55
		Rai (Mustard seeds) 40 gm.*	2.73
		Fenugreek 25 gm.*	1.72
		Citric Acid 20 gm.+	1.37
		Coriander 10 gm.*	0.68
		Turmeric 5 gm	0.34
		Black Cumin 1 gm.	0.06
		Other Ingredient	**2.4**
	Total		100%
8.	Green Chilly + Garlic	Green Chilly 500 gm.	34
		Garlic 500 gm.	34
		Lime Juice 200 gm.	13.6
		Mustard Oil 125 gm.*	8.5
		Rai (Mustard Seeds) 40 gm.*	2.71
		Fenugreek 25 gm.*	1.72
		Citric Acid 20 gm.+	1.36
		Coriander 10 gm.	0.67
		Turmeric 5 gm.	0.34
		Other Ingredient	**3.1**
	Total		**100%**

Sl.	**PASTE**	**Certified Ingredient (per Kg.)**	**Weight%**
1.	Garlic	Garlic 1000 gm.	98.04
		Citric Acid 20 gm.+	1.96
	Total		**100%**
2.	Ginger	Ginger 1000 gm.	98.04
		Citric Acid 20 gm.+	1.96
	Total		**100%**
3.	Ginger + Garlic	Ginger 500 gm.	49.02
		Garlic 500 gm.	49.02
		Citric Acid 20 gm.+	1.96
	Total		**100%**
4.	Mustard	Mustard Powder 500 gm.	86.95
		Wheat Flour 500 gm.	8.69
		Citric Acid 15 gm.+	2.6
		Maize Flour 5 gm.	0.87
		Turmeric 3 gm.	0.52
		Other Ingredient	0.35
	Total		**100%**

Appendix 8.4

Other organic players in Gujarat

Jatan

Jatan, Vadodara is registered as an NGO under the Charitable Trust Act. Jatan has been into organic procurement and marketing for the last ten years. The farmer experience is used as testimonials to promote organic farming and demonstrations and meetings are used to spread the concept of organic farming among the farmers. It has a total of 6 staff of whom two work for the shop exclusively.

Procurement

Most of its suppliers are large farmers and the produce is largely from local villages. The total number of supplying farmers is eight. Other than vegetables, rice, wheat, pulses, spices, jaggery and milk are the other products sold. Some of them are also home delivered by the farmers directly. One of the suppliers is Mr. Saravdaman Patel based in a village near Karamsad (near V V Nagar), who has been supplying for the last five years and cultivates 40 acres under organic farming. He supplies 80% of the total requirements of Jatan, either daily or on alternative days. The farmers supply to the NGO under an informal arrangement. It pays market price plus 25-30% premium.

Processing and Packaging

It has a small packing machine for consumer packs of 500 grams, 1 Kg. 2 Kg., and 5 Kg. which are labeled with the NGO name and address. Some farmers also give processed products like spices and oil in bulk which is then repacked into consumer packs.

Marketing

It has two shops for organic produce selling.- one at its office and another in the city. The first shop called Jatan Vitaran Kendra is ten years old and the second one four years. It sells 15-20 tones of jaggery every season and 25-30 liters of milk daily besides 200 liters of home delivered milk by the farmers directly. It has monthly sales of Rs. 50-60 thousand. It claims to be not a shop, but has a poster containing Mahatma Gandhi's saying on value of customer. Besides selling in retail, it also facilitates bulk orders wherein farmers directly supply to the buyer. It does not believe in certification and goes by trust and peer feedback to monitor and ensure quality.

It has also supplied to some institutions like cancer hospitals or put institutions in direct touch with the supplying farmers. About 60-70 buyers visit the shop daily and in season it goes up to more than 100 of which 80% are women. Its daily sales are of the order of Rs. 6,000/- in season. The shop opens only for two hours in the morning and three hours in the evening. It earns 3.07% of total sales after all costs. It charges 20% of the price as commission and claims that 80% of the consumer price goes to the buyer. In cereals, pulses and spices, it is as high as 85% and almost 100% in

vegetables. It does not believe in exports or commercialization of organic activity and focuses more for local market. It also did mobile van sales for 2-3 months to get a clientele.

Sanskruti

Kanubhai Patel has 17 hectares of own land for organic production. He also procures from other growers (3) and has a chemical export business. He is a farmer trader. He is not certified organic and sells his produce under the banner of chemical free, traditional, natural farming. He has been growing organic for the last one year and sells under the name of Sanskriti Traditional Farming in supermarket chains like Big Bazaar, Star India Bazaar, and Pantaloons in Ahmedabad where he has counters for his produce. Supermarkets keep vegetables not as a profit centre but more to attract customer for other products as customer expect everything under one roof. His sales account for 20% of the total sales of vegetables at Star India Bazaar. He also has another shop owned by him and two vegetable shops in the town which sell his produce. His major produces are fruits and vegetables, wheat, rice, pulses, sesame, Jowar and Bajra. He has daily sales of Rs. 2,500 from vegetables alone and they are increasing over time due to freshness, taste awareness, and trials of the produce. He suffers 20% wastage each on farm and in shops and sells about 100 kgs. of vegetables daily. He gives 25% margins to the supermarkets on his sales. The supermarkets do not allow him to charge lower than their own vegetable prices. He gets the advantage of super market's space, display and advertising for selling well. He has been provided crates by the supermarkets for transporting and selling his produce. His prices are supply driven due to the wastage in vegetables if not sold every day.

Bhai Kaka Krishi Farm

Sarvadaman Patel started with 2 acres of vegetables in 1999 and started selling to Nature Fresh, a local shop, which is no more organic. To begin with, he was also selling his produce in the open market as conventional produce. By 2000, he had converted all his 40 acres into organic with 10 acres under vegetables. 2-3 acres under cereals and pulses each, and 10 acres to fodder. His farm is totally biodynamic and he has linkages with CEE, Ahmedabad and Morarka Foundation for training. He has the experience of growing seed for National Seeds Corporation and now procures seeds from Nanhems and Namdhari Seeds. He is a US returned agricultural graduate and practitioner with strong belief in organic agriculture and trains farmers in organic farming methods and philosophy. He also gets supplies from three other farmers in the neighboring villages sometimes. He gives 20% premium on local market price and picks up from their farms if the produce meets quality standards. Sometimes, he provides them some advance for inputs. He supplies to Jatan, Vadodara since 2001, thrice a week. The supplies to Jatan are of the order of Rs. 2,000/- per delivery and Jatan charges 25% commission on sales. He also supplies to two outlets –Parakh, an NGO, and Kamlesh Patel, an individual shopkeeper, both in Ahmedabad. They buy worth Rs. 1,000/- and Rs. 400/- every time i.e. twice a week, respectively. He also has another shop in Vidyanagar which gets his produce occasionally. He home delivers directly and through some organized groups like the FES which collects orders from its employee families and conveys to Mr. Patel. He has also been supplying of milk to Karamsad Hospital since 1999.

Since 2003, he has an organic hut outside his farm at the State Highway which started with sales of 500 rupees per day and has now reached Rs. 3000-4000 per day and even Rs. 10,000 on Sunday. His prices are 20% higher than local market conventional produce price which are monitored weekly. Most of the time, prices are supply driven and he charges even 100% premium if the product is in shortage. About 70% of his sales are from his own outlets and 30% through others. He is focusing on domestic market in Baroda, Anand, Vidyanagar and Ahmedabad. Major problems are lack of regular supply and regular demand. He has his own trucks (hired) for delivery to Baroda and Ahmedabad. He has only one attendant at the shop generally and three on Sunday. There are also problems of keeping vegetables in summer.

He gets most of the inputs from outside like rock phosphate from Udaipur, seaweed from Kutch and Neem cake and Caster cake from Mehmadabad and Karamsad. Most of the inputs are non-branded and locally produced. 50% of the seeds are produced in-house and the rest procured from outside. In fact, organic seed availability is a major problem. He washes the seed procured from outside to remove the pesticides. He had initiated certification with INDOCERT but discontinued after two years.

He has first mover advantage in this field and not worried about the competition as very few can offer full range of products. He is also opening an organic restaurant at the farm which will serve twice a week, with advance booking, totally organic food. He is of the view that higher volume can reduce cost. He has now started making some profits from his organic operations. He is of the view that small growers should not go for vegetables as their marketing is risky due to high perishability.

Appendix 8.5

Other organic players

Delhi

The other players, besides Fabindia, in organic food in Delhi include Navdani, Dubden Green, Brahm Arpan, Whole Food, and Grewal's. Pulses (17%), spices (18%) and cereals (24%) accounted for almost 60% of total organic food product purchases in Delhi. Navdanya, Grewal's, Wholefoods, and Dubden Green had market shares of 41%, 18%, 9% ,and 9% respectively. A sample survey of 17 retail outlets revealed that 2 stores were selling Organic Food Products for the last 6 years, 5 stores for the last 2-3 years, 4 stores for the last >1 year and 6stores for <1 year only. The maximum stock was that of wheat atta and basmati rice perhaps due to low perishability, and popular products (FMCGs) were tea, brown rice, sabat moong, kabuli chana, and moong dal (Vani, 2005).

Navdanya

It has been into organic foods for the last 10 years. It has three outlets in Delhi now, one at the dilli haat, another at vansat kunj which opened only this October, and yet another at haus khas which an organic slow food café. The outlets are still functioning as they are subsidized esp. the vasnat kunj as given the costs of store i.e. rent, staff, and other expenses, it will not be viable to sell only organic food. These outlets sell bread, pau bread sticks, and salads in partnership with Nirulas who make these products with the Navdanya supplied organic ingredients. Both Navdanya and Nirulas put their brand names on the products and they are sold from the outlets of both the organizations. It has certified and natural products including pulses, amaranth atta, rajmah, juices and squashes.

Its dilli haat outlet has 23 products certified by SGS as organic which come from 47 farmers with 215 acres of certified farms in Dehradun, Garhwal, Rudraprayag, and Uttarakashi including a farm of Navdanya (20 acres). Navdanya Trust has the organic certification from SGS under NPOP since April 2003. The outlets are managed by Navdanya Agro Tech Research Foundation and ready to eat cooked food is served at the outlets.

Dubden Green (DG)

DubdenGreen has been set up two years ago by Jayashree and Ganesh Eashwar, corporate executives who decided *"to give back something to the earth from which we have taken so much, for so long".* DubdenGreen believes in clean, healthy living and respect for our environment. It used its organic farm to learn the skills needed for organic production and marketing.

It was set up to market organic, herbal and eco-friendly products. But, having realised the limitations of trying to do everything on its own due to constraints of land, money, and energy - it opted to link up with others already into the health space and to work together with them to reach the benefits of healthier products, to a wider audience,

with focus on marketing which was largely unattended in domestic market for organic produce in India. It is essentially a retailing and branding enterprise.

It decided to depend on the old adage of "being purer than Caesar's wife" as it could not afford the cost of certification. It just took greater care and rigor in ensuring its farm was "organic". It sold not only vegetables, grams and fruit that it grew, but also produced and marketed organic peanut butter, jams and pickles through an NGO based in Bangalore. They own an organic farm of 20 acres near Bangalore.

Its suppliers include some of those who also supply to FabIndia like INHERE, and others like Grewal Farms, Sirsa, and Conscious Foods. There are some supplies from its own organic farm as well but not certified. It sources products from suppliers as and when needed. Its Major suppliers are:

Natural products

Aarohi -cosmetics, bhuira- jams/jellies/spreads, conscious foods-healers, snacks and sweetners cosmetics, honey, spices, Crismona- edible oils and ghee, Dubdengreen- bfast, honey, snacks, Durga Pharmaceuticals- healers, green heart- healers, snacks, Indfrag – healers, Mulkusha –edible oils and ghee, Organic India –healers, Stree Sanghshema Trust –cosmetics, Stugar -sweetners

Organic products

Aarohi- beverages, Aura Annam-beverages, Conscious Foods- grains, healers, herbs, pulses, snacks, spices, sweetners, atta, Dubdengreen- beverages, breakfast, clothes, atta, fruits and vegetables, grains, pulses snackas, spices, sweetners, Grewals- bfast, edible oils, ghee, atta, grains, pulses, spices, sweetners, Health fields- edible oils, grains, ghee, pulses, Nandan Royale- beverages, Navdanya- break fast, edible oils and ghee, atta, sweetners, Organic bounty- beverages, Organic India-beverages

Product Range

It offers a reasonable range of branded organic groceries - grains, pulses, condiments, brown sugar, jaggery variants and derivatives, honey, jams, squashes, pickles, tea and coffee. In fact, almost everything for the kitchen! It also has access to organic fruits and vegetables and are working on the modalities of offering these on a regular basis and in larger quantities)

Further, it also stocks "health" products, which are not necessarily organic - for instance, whole-wheat bread, which is better than maida bread. Obviously, whole-wheat bread made from organic wheat would be even better.
It will soon feature a small cafe, which will serve organic coffee, tea, fruit juices and snacks - pastries, bread, cookies, pizzalets, quiches, and many other things.

Its product range includes

Natural :breakfast -all, cosmetics-all, edible oils and ghee, healers, honey, jams and jellies/spreads, chutneys, snacks – crackers, edible seeds, Spices/condiments, salt, sweetners

Organic – beverages- tea/coffee, herbal tea, breakfast –all, organic cotton clothes, edible oils and ghee -all, flour-all, fruits and vegetables -all , grains- rice and others, healers- all,herbs –all, pulses-all, snacks- cookies, dry fruit, edible seeds, spices and condiments- others, sweetners –all

Certification
About 60% of their organic food range is certified and 40% non-certified or natural or traditional products which sell due to trust and store guarantee. While it offers certified organic products from its store, it is also working with NGOs and farmers directly, even where they have only recently become organic growers, and it stocks their "convergence" products as they are traditionally organic. Since certification is essentially to provide the necessary reassurance and trust that the produce is indeed organic, it believes that dedicated organic stores and brands can help build this trust between the grower and the consumer, until the time certification becomes more viable.

Distribution and retailing

It has an outlet of its own at Shahpur Jat in Delhi, which acts as a mini-departmental store with a greater focus on organic produce and products and serves as the shop-cum- warehouse-cum office of the enterprise. It also has stores-in-stores (shop-in shop stores) in Sabka Bazar in South Extension and counters and shelves in seven other places in Delhi. It sells at these counters with its own staff and gives margins to the stores as distribution margin. Here also, both certified and traditional products are sold. Besides, there are website based on line sales of products which are home delivered. The major problems in supply chain are initial sourcing is difficult, regular supply is not there and consistency in quality is missing. It is of the view that certification introduces new middlemen in supply chains. It is not in favour of certification for domestic market as unlike international market which buys products in bulk and therefore needs certification, domestic market buys in retail and buys brands and, therefore, what is important is trust in the outlet or chain.

It buys with different approaches like market rate or cost based and does not believe in paying premium as it wants to make organic food affordable for all. The owned shop sells more than any other store-in-store they have. It is inclined to get its supplies more from NGOs and small individual growers to lower costs and expand the market by selling at low prices.

Hyderabad

Sresta Natural Bioproducts

It is a new venture in organic production, processing and marketing set up in late 2004 at a cost of Rs. 2 crore which includes central warehouse, packing unit, baking unit and a bakery shop (called Boulangir) and cleaning and grading unit. The promoter of the company is an IIMA graduate and owner of 20 acres of land which is used for farming of organic produce. Some of the employees are also shareholders. Right now, it can not offer shares to producers as it is a private limited company and can only give bonus. Its other brands include ‘Nabha’ for specialty food products and

'Purity Prayag' for snacks The processing is on job basis. It has a staff strength of 10 in head office and half a dozen, with 50% temporary, in the organic sales outlet at Banjara Hills called **24 Lettered Mantra** (refers to air, water, earth, fire and sky) which opened on May 7, 2005.

It sources produce from 5000 acres from groups, and NGOs and another 5000 acres from individual farmers in Maharashtra, (VOFA in Yavatmal and also in Akola and Amravati), and other farmer groups in Nasik and Jalgaon), Rajasthan (Morakra Foundation and farmers in Jhunjhunu and Sikar), Orissa (Koraput) and AP (Adilabad and Rangareddy districts). It has written contracts with individual growers and groups. The contracts specify quality aspects like physical attributes, color, shape, moisture and cleanliness, and delivery aspects, and only quality produce is procured. The company picks up from farms/collection centres in gunny bags in bulk.

The largest of its farmers are with 40-50 acres of dry land and smallest with 2-3 acres land in Orissa, Rajasthan and AP. The average size of a grower's holding is 4-5 acres. The company is not focusing on larger growers as they do not have sufficient organic matter for inputs. The NGO groups are only for the time being and the ultimate focus of the company is to develop its own contract farmer base. The NGOs also get commission for tasks like procurement and storage. ICS is done by the company at the farmer group level.

The contracts with growers are open ended in duration but those with groups/NGOs are for 2-5 years and extendable. There are 7-800 farmers with direct contracts in Maharahstra, Rajasthan, Orissa and AP. The company has the first right of refusal on the farmer produce and they have to follow organic standards. The products procured include cereals, pulses, fruits & vegetables, edible oils, spices and jaggery. The certification is done by SKAL (Netherlands), IMO (Switzerland), and Ecocert (Germany) for USA NOP standards and EURO 2092/91 standards. Most of the farms are under conversion and the company meets the cots of certification which Rs. 600-700 per acre annually. The company/group/NGO gets certificate, not individual farmers, as it pays.

The price offered is market price plus premium of the order of 5-10% and a bonus based on the performance of the company is promised. The company is of the view that the farmers do not prefer fixed contract price over market plus price. No extension is provided by the company as it is not really needed. But, still wherever there are NGOs, they provide extension to farmers to whom the company provides per acre or per farmer support (Rs.400-600/acre or farmer). The company is planning to introduce crop and health insurance for growers. The company uses NGOS as they are more suitable for social mobilisation for organic farming and extension support. It is focusing on domestic market first and will venture into exports of its branded products after establishing itself in domestic market. It is also planning to try 'shop in shop' concept in Hyderabad and Chennai and also institutional sales. It charges 25% premium on organic products. It believes that success in organic produce marketing will depend on pricing, credibility, assured supply, and variety.

Chapter 9

Nature of Organic Farming Contracts

As seen from the case studies, most of the projects involve some sort of contract farming as a mode of coordination with growers. Therefore, an analysis of contracts in terms of what they offer to the growers and how they distribute risk and costs between grower and sponsor is crucial as there are additional costs of certification besides the general distribution of production and marketing risk between the two parties as is the case in conventional contract farming. This is also important in view of the amended APMC Act which makes contract farming legal and provides for the protection of farmer interest. The State Agricultural Produce Marketing (Development and Regulation) Act, 2003 deals with setting up of private markets, selling of produce by growers outside the APMCs (regulated markets), setting up of direct markets, specialized commodity specific markets, regulation and promotion of CF, provision for agencies and measures to promote quality, standards, and alternative markets, and public-private partnerships to facilitate more and better linkage between firms and farmers (GoI, 2004). The main provisions of the APMC Act on contract farming are:

A) Mandatory provisions which include aspects like who can undertake CF, contract specifications, liabilities, farmer asset indemnity, and dispute resolution.
B) Optional features which include those relating to farm practices, insurance, monitoring, role of farmer body, and support from the sponsor. Under this Act, registration for contract operations with local authority is a must and the model contract agreement is quite fair in terms of sharing of costs and risks between the sponsor and the grower (GoI, 2003) (Appendix 9.1). But, here again, there are state level variations in the amended Acts and the spirit has been diluted. For example, in Gujarat, the amended Act makes the APMC as a party to the contract which is totally unnecessary and will only create problems as that is not the best way to protect farm interest, if that at all is the logic for giving the role of a party to the contract to the APMC in contracts between sponsors and the growers.

Nature of Organic Cotton Contracts

Company and Farmer obligations

In the case of Agrocel fair-trade organic cotton, only duty of the buying company specified is: 'Agrocel will buy with good support price'. But, as part of its fair trade commitment in the form of protection of farmer independence, the contract also states:

1. I will sell my seed cotton to any other buyer, and Agrocel or producer organization cannot push me to sell under FLO label.

2. I will not accept Agrocel interference into decision making of our producer Executive Committee.

In the case of Pratibha Syntex organic cotton, the contract only states:

'The company ('First Party) is responsible to purchase the crop when it is certified by the representative/inspector/consultant'

'If I follow the rules and regulations of the Organic Farming satisfactory and fulfill all the conditions of Organic Farming, then it is clear that my entire crop /s ……..will be sold to Pratibha Syntex Pvt. Ltd. (First Party) or its representative but for other Organic crops, Representative/s of First Party will make efforts to get appropriate market and accordingly it will be sold'.

On pricing, the agreement states:

'According to the quality of cotton, the First party will pay a premium of 15% on Mandi rates to the farmers in the form of inputs like seeds, DOC, Econeem, V.T. etc.

On the other hand, the farmer provisions include:
'Before selling of any crop, I will take written approval from the First Party or its representative'.

'Under this agreement, I agree to sell all my crops, other than Cotton, i.e. soybean, wheat and pulses to the First Party (Pratibha Green Technologies Pvt. Ltd., Indore) at reasonable rates'.

The agreements are silent on certification support and control though the certification is arranged by the companies and certificate retained by them to which growers have no access.

There is no sharing of production risk or risk of crop failure in any way by the companies. Even the arbitration right is also with the company (Pratibha Syntex) only

despite the fact that the growers are supposed to be organised into groups in both the cases. For a comparative picture of the organic cotton contracts of the two companies, see table 9.1.

Table 9.1: **Comparison of organic cotton production contracts**

Sr. No.	Contract Feature	Name of the Firm	
		Agrocel	**Pratibhai syntax**
1.	Type of contract	Not mentioned	Acreage
2.	Decision factor	Self consciousness	Not mentioned
3.	Produce quality and price	2nd party to grow good quality cotton for good price	15% premium on mandi price to be paid according to quality of cotton, in the form of inputs.
4.	Inputs	Not mentioned	a) use of certified compost inputs or alternatives like green manure, rock phosphate, and deoiled cake b) Use of bio-insecticides like Neem oil. c) no use of chemicals/non-permissible input/s on field d) no use of treated seeds
5.	Organic farming practices	Farmer has to use all training and education provided to him by Agrocel.	Farmer agrees to maintain international standards and practices applicable to organic farming and follow the guidelines given by the field consultants.
6.	Technical support free of cost	Agrocel will give training and education to farmers.	Not specified
7.	Sales only to company	Yes, but cotton seed can be sold to any other buyer	a) Farmer agrees to sell all his crops including rotation crops like soybean, wheat and pulses, to the 1st party at reasonable rates. b) Before selling any crop, farmer will take written approval of 1st party.
8.	Purchase of organic produce	Agrocel will buy the produce with good support price	1st party is responsible to purchase the crop after certification by the inspector. It will also try to get a market for rotation crops
9.	Certification Information	Not specified	For certification following information is required: a) record of crops b) all circular & formats issued by the 1st party c) information regarding pest attack, soil quality, farm map, picking & harvesting details, sowing etc.
10.	Inspection	Farmer to allow FLO inspectors to visit and	Farmer to provide sample of soil, plant, leaf, flower, or flower to the

		inspect his farms and other related premises	inspector for testing.
11.	Arbitration	Not specified	1st party's representative
12.	Farmer default	Not specified	Farmer will be a defaulter under following situations & his membership will be cancelled:- a) during testing if he is found using prohibited inputs b) If he gives/borrows sprayer pumps to/from any conventional farmer.
13.	Signatures on contract form	2nd party (farmer) only	Both parties
14.	Language of the contract	Hindi	Hindi
15.	Organic produce price premium	Farmer fair trade premium (not specified) to be deposited in a separate account to be used by the farmer group.	15% premium on market price
16.	Individual or group	Farmer has to join fair trade group	Farmer has to join Organic Cultivation Project of Pratibha Syntex Ltd.
17.	Documentation	Not specified	Documentation by the farmer of all the farm operations is necessary for certification.
18.	Period of contract	Not specified	No. of years as specified in the contract.
19.	Development programs	Not specified	It is compulsory for the farmer to attend all the training and development programs organized for the farmers.
20.	Understanding of organic farming	Not specified	Farmer completely understands the method of new Organic Farming that prohibits the use of any chemical fertilizer / pesticides in crops & seed.
21.	Fair Trade	Following clauses with respect to fair trade are included:- a) no use of child labor b) fair wages to labor	Not specified

Nature of Processed Food products Contracts:

Some companies do not even assure to buy produce, for example, in case of Sresta, the agreement (as part of the SKAL agreement for certification) states:

'I agree to sell my produce to company at the prevailing market prices and the Company at its sole discretion may declare an annual bonus based on the company's performance. In case the company cannot buy the produce, I can sell to others.'

Thus, there is no liability of the company in case it fails to procure farmer produce especially when the produce is organic and grown only for the company. Further, the company only promises to provide prevailing market price. Is it not a mockery of the very contract farming system itself where no production or market risk is shared?

On the other hand, the IEEFL, Pune contract which is much more clear in purchase assurance and even ensures that primary producers get payments in time as it does not deal with them directly, states:

1. IEEFL will purchase all the crops as per the specified quality produced by the registered farmers from time to time. IEEFL will also agree to purchase in future other commodities produced by _____ as per the agreed terms and conditions.
2. Payment will be made by IEEFL or through its authorized representative agency to _____ within 15 days after the dispatch of crop by _____ from _____ collection centre or farmer's field.

3. It is also agreed that first party will take the responsibility of proper payment to their farmers further to our payment.
4. Transporting crop from farm gate or collection centre will be done by a transport contractor arranged by First party to whom payment will be made directly by IEEFL through the processor. The person who is coordinating dispatches from _____ will fix up the transportation cost from time to time in consultation with Manager of IEEFL.

5. It is hereby agreed that the minimum required quantity supplied by _____ will be ___ MT in the first year and an average increase of 20% Compound Growth Rate as per the details given below.

Nature of Organic Basmati Paddy contracts

The Agrocel and the Picric Basmati contracts state:

'As informed by you, the company will pay for the additional cost (upto 10% of paddy price) incurred due to the production practices determined by you. Your company will buy the paddy produce and will give 15% premium over market price.

'The first party agrees to buy the produce as will be decided mutually in the general committee including details about price and quality aspects of the produce'.

'Terms of Payment and the Incentive structure will be as follows:

A. Certified organic produce: 10% of the market price of basmati paddy will be paid to farmers as compensation for additional costs of organic production. Further, 15% of the market price of basmati paddy will be paid as incentive to growers. These payments will be made on the spot.
B. In-conversion produce: 10% of the market price of basmati paddy will be paid to farmers as compensation for additional costs of organic production. Further, 15% of the market price of basmati paddy paid as incentive to growers will be kept as deposit with the bank/Agrocel Industries Limited and will be paid after the farm is certified organic.

'The first party agrees to provide organic farming extension services to help the farmer to achieve high quality organic production in sufficient quantity. In addition, it will support them in internal quality assurance programme so that farmers' group and the second party could achieve high quality organic production. Further, the first party (Agrocel Industries Limited) will try to help farmers in organic soil management suitable for rabi crop.

All other provisions of the contact relate to farmer responsibility. This contract is very specific and clear in terms of its provisions on price for both organic and in-organic and its payment. It also promises to help farmer in other production related aspects of the crop production. The only problem with the contract is its conventional produce market price based pricing and no liability of the company in case it fails to buy the produce. Further, it is silent on certification support and control of certification facility/right which are so crucial for the growers and says nothing about company obligation in case of crop failure.

Similarly, Satluj Organics contract states:

1. sale of produce by the grower only to SOPL and will register land for organic production through land registration form
2. SOPL will inform the grower about the crop/s to be grown, one month before sowing
3. All produce to be sold to SOPL on agreed terms and conditions
4. All post harvest operations as per SOPL advice
5. SOPL will buy certified and/or inspected produce as per terms and conditions. The reference markets for determining price will be:

Basmati – Bulandshahar in UP
Rudrapur in Uttaranchal
Traori in Haryana and
Amritsar in Punjab

For sugarcane, it will be the nearest sugar mill in the area

For wheat, it will be MSP in mutually agreed markets

Premium specified are 5% over market price in the first year, 20% in second year and 35% in the third year and 50% in fourth year in basmati paddy. In sugarcane, wheat and pulses, it is 0%, 10%, 15% and 20% respectively. They are to be paid on receipt of the inspection report and within 90 days of delivery of produce.

6. Use of non-permitted (non-organic) input swill lead to farmer being disqualified
7. non-delivery will lead to indemnity
8. Extra contractual sale will be penalized as follows:

a. damages that SOPL pays will be recovered
b. compensation for loss of profit to SOPL at the rate of average of last three years
c. cost of inputs and other expenses

9. No right to sell product to any other party
10. SOPL can terminate the contract on a two month notice

The Sutlej contract is very detailed in its price related aspects and imposes penalties for non-compliance in terms of non-delivery and extra contractual sale besides use of non-organic inputs. But, the payment terms are poor as 90 days time is not short time and there is no mention of any penalty or interest for delayed payment by the

company. It also does not specify any penalty in case the company fails to buy the produce. Further, there is the silence on certification support and control.

The UOCB contract which represents a state sponsored agency working with small producers has a contract which specifies that:

1. The second party (grower) will strictly follow the standards, quality parameters and rules of organic farming as given by Uttaranchal Govt. or the certification agency.
2. The organic producer will have to meet EEC regulation No. 2092/99 and Demeter standards.
3. The second party will work as part of the group formed by the first party and will not do anything which may do harm to the other organic farmers' produce or farm.
4. From time to time, the second party will get the ICS (internal control system) done and will abide by the decisions of the ICS committee.
5. The second party will co-operate fully with the internal or external inspectors for the inspection of organic farm, storage, documents, and any other aspect of the inspection.
6. The first party can cancel the agreement with the second party it is found by the ICS committee or the first party that the second party has violated the norms.
7. The first party will have the first right to procure the organic produce of the second party.
8. The farm will be considered in conversion period for a minimum of 2 years and a maximum of 3 years from the date of the last use of chemical fertilizers/ pesticides/weedicides (as per certification agency norms).

It is highly one sided like other contracts as it does not specify any obligation of the buyer and is silent on certification control and rejection of produce despite the fact that it works with producer groups.

For a comparative picture of the organic basmati contracts of the two companies, see table 9.2. Further, all of the contracts protect company interest at all costs to the farmer and do not cover farmer's production risk e.g. crop failure, and offer conventional produce market price based prices to their growers. This is a serious issue as even a significant premium over market price may not help a farmer if open market prices go down significantly which is not uncommon in India.

Table 9.2: Comparison of organic basmati paddy production contracts

Sr. No.	Contract Feature	Company		
		Agrocel/Picric	**SOPL**	**UOCB**
1.	Type of Contract	Acreage	Acreage	Acreage
2.	Storage	Store at places free from biological & chemical contamination.	Not specified	Inspection of storage of organic produce will be done.
3.	Quality	To be decided in the general committee.	No specified	Not specified
4.	Input	Not specified	Seeds and manures to be used as per the advise of SOPL	Farmers to use household waste, cow dung & other organic matter on their farms.
5.	Organic farming practices	All operations according to certification agency	All operations as per the direction given by the first party.	All operations according to standards specified by Uttaranchal Govt.
6.	Technical support free of cost	Yes	Yes	Yes
7.	Sales only to company	Not specified	Yes	Yes
8.	Inspection	Farmer to cooperate in internal & external inspection	Yes	Yes
9.	Arbitration	Decision of the representative of the 1st party would be final.	Delhi Court	1st party's decision would be binding.
10.	Farmer Default	Contract termination	Contract termination	Contract termination
11.	Signatures on contract form	Both parties	Both parties	Both parties
12.	Language of the contract	Hindi	English	Hindi
13.	Price	a) 10% premium on mkt. price for compensating increased costs b) 15% premium on mkt. price as	a) 5% premium on mkt. price in 1st year b) 20% in 2nd year c) 35% in 3rd year	Nothing specified

		incentive to farmer.	d) 50% in 4th year	
14.	Premium on exotic crops	Not specified	No premium on exotic crops	Not specified
15.	Individual or group	Group	Not specified	Group
16.	Documentation	2nd party will help in completing farm documentation for inspection & certification	Not specified	1st party to provide complete documents about certification.
17.	Period of contract	2nd party to keep the land under organic system for a minimum period of 5 years.	5 years	5 years
18.	Farmer meetings	2nd party to participate in all meetings arranged by the 1st party for crop planning & for organic production training to farmers. Decisions taken on crop rotation binding on 2nd party.	Not specified	2nd party to attend all meetings, exposure visits, training, workshops & other such programs from time to time.
19.	Extension services	1st party to provide extension services to help farmers achieve high quality & quantity organic production	Not specified	Not specified
20.	Extra contractual sale	Not specified	It will be penalized as follows:- a) recovery of damages paid by SOPL b)SOPL's profit loss to be compensated. c) input costs & other expenses .	Not specified
21.	Labeling & transportation of organic produce	All labeling & transportation of organic produce by 2nd party to be done in accordance to 1st party which will follow standards laid down by certification agency	Not specified	Not specified

Further, though most of the organic projects are organised on the basis of grower groups for certification purposes, none of the projects, except the Organic Chetna has any substantial group activity. Even all the contracts are individual grower contracts. This shows that the companies are interested in groups only to avail of lower cost certification in all cases and fair trade certification in some cases. The design and nature of contracts speaks volumes about the governance of these projects in terms of producer autonomy and participation in these projects. It shows that the organic projects are being managed like conventional contract farming projects as most of the players are originally conventional produce players.

Appendix 9.1

Addendum on Contract Farming Agreement and Its Model Specifications (Part of Amended APMC Act), 9th Sept 2003

Contract Farming Agreement and Model Specifications

CONTENTS OF A MODEL CONTRACT FARMING AGREEMENT

MANDATORY PROVISIONS -

I. Parties To The Agreement

a)Contract Farming Sponsor – It may be a sole proprietor, a company registered under the Companies Act, 1956, a partnership firm registered under the Partnership firm 1932, a Government Agency, A Cooperative Societies registered under the State Cooperative Societies Act and shall include its administrators, successors, representative and assignee.

b)Contract Farming Producer/s includes an agriculturist, farmers' associations, self-help groups, authorized tenants and farmers cooperatives societies registered under the State Cooperative Act. The expression shall include the successor, heirs, executors and representatives of the party contracting the agreement.

II. Description of Farm Land Covered by Contract Farming Agreement

a)Acreage, Location – This would provide land particulars as recorded with the revenue authority of the concerned area.

b)Facilities available – This would stipulate availability of irrigation, its kind and other specific features reflecting on production.

c)Nature, tenure, rights etc. of the Contract Farming Producer/s on the land

III. Duration of Agreement

a)Seasonal

b)Annual

c)Long Term (3-5 years)

Explanatory note: The duration of agreements depends on the nature of the crop. Contracts for short-term crops such as table vegetables are normally issued and renegotiated on a seasonal basis, whereas crops such as tea, coffee, sugar cane, and cocoa require long-term contracts that can be amended periodically.

IV. Description of Farm Produce

This would clearly indicate name of the agricultural produce with specific variety or any other characteristic, which the buyer wants the producer to grow on the contracted land identified under clause 2.

V. Quantity Specification of the Farm Produce

This would indicate the quantity of produce in respect of which the agreement is entered into. This could be determined on the following basis:

a)On volume basis

b)On Area Basis

c)Entire Crop

d)Fixed Quantity

Explanatory note: Quotas are employed in the majority of contracts in order to utilize processing, storage and marketing capacities efficiently; guarantee markets for all farmers; ensure quality control; and monitor farmer's performance. The allocation and distribution of production quotas will vary according to crop and circumstances. Where there is no alternative market for the crop and farmers have made significant long-term investments in production (tree crops) or processing facilities (e.g. tobacco curing barns), the sponsor must be committed to purchase the entire crop covered by the quota. This obligation, of course, is subject to the crop meeting the agreed quality specifications. The most common and practical method is to allocate quotas on an

area basis, with sponsor calculating the total area to be cultivated in relation to the project's processing capacity and their knowledge of each farmer's expected yield. Where there are alternative markets for crops under contract, quite often farmers are tempted to sell outside the contract. Quotas deliberately set at levels lower than the farmers' actual production capacity may enable them to take advantage of high open market prices when they occur. Such an arrangement is likely to apply particularly when the pricing arrangement is for a fixed price rather than a market-based price.

VI. Quality Specifications of Commodity Contracted

a)Quality specifications in terms of size, weight, degree of maturity, packaging, intrinsic quality like juice content, safety requirements, if any

b)Agency to decide quality in case of dispute

c)Consequences of non conformity with quality specifications

I.Rejection

II.Reduction in price

III.Any other

Explanatory note: Contracts should contain quality specifications of produce covered by the agreement and indicate as to whether the produce that does not conform to the agreed criteria can be rejected. It is important that farmers fully understand the reasons for standards. Contract sponsor should demonstrate the grades to farmers at the beginning of each season and explain the rationale for the specifications. Wherever possible, the number of grades should be kept to a minimum and each grade's specifications should be presented in clear terms. Often, however, there may be a need for only one standard, with all produce delivered being required to fall within a particular specification range.

VII. Crop delivery arrangements

a)At Farm gate

b)At Processing Unit

c)At specified Collection centers

d)Transportation arrangements

Explanatory note: Arrangements for collection of products or delivery by the farmers vary widely. Some ventures stipulate that farmers should deliver their harvest to processing plants at given dates; others may include the use of the sponsor's transport to collect harvested crops at centrally located buying points. For contracted fresh vegetables a normal practice is farm gate collection. When the sponsor's transport is used there is normally no cost to the farmer. In the sugar industry, farmers deliver their harvested cane to a central loading point from which it is then transported to the crushing mill, weighed and purchased. Many formal contracts have clauses that outline the obligations of both the farmer and the sponsor regarding delivery and collection respectively. As a routine practice, sponsors and their extension staff should confirm delivery or collection arrangements at the beginning of each season and reconfirm these prior to harvest.

VIII. Pricing arrangements

a)Fixation of Price

b)Payment and Loan/Credit Recovery Procedure

c)Advance Payment

d)Credit in Cash/ Kind (input)

e)Recovery of Bank Loan

f)Payment on Delivery

g)Final Payment

h)Arrangement with Banks

Explanatory note: Pricing and payment arrangements are the most discussed and challenging components of all farming contracts. The choice of which crop pricing structure to use is influenced by whether the crop is for the local or export market, the seasonal nature of production and the degree of competition in the marketing system. The application of transparent pricing formulas is crucial and the drafting of a clear pricing structure and the organization of a practical method of payment encourage confidence and goodwill. There are several ways prices offered to farmers can be calculated. Fixed prices are the most common method. The practice is usually to offer farmers set prices at the beginning of each season. In almost all cases, fixed prices are related to grade specifications. Flexible prices structure applies to prices calculated on a formula related to changing global and local markets. This form of pricing is common in, for example, the sugar industry where the final price to the farmer is known only after the processed sugar has been sold. Under Split pricing system an agreed base price is paid out at the time of purchase or at the end of the harvesting season. The final price is calculated once the sponsor has on-sold the commodity, and depends on the prevailing market price. If the crop is sold in the fresh form the second price can usually be calculated within a month. When the product is processed it may take much longer.

IX. Registration and Dispute Resolution Mechanism

In the majority of cases, it is highly unlikely that a sponsor will take legal action against a small holder for a breach of contract. The costs involved are inclined to be far in excess of the amount claimed, and legal action threatens the relationship between the sponsor and all farmers, not just those against whom action is being taken. Action by a farmer against a sponsor is similarly improbable. As neither side is likely to seek a legal remedy through the courts, it is important that quick and easy ways of resolving disputes are identified in the agreement. A body representing the sponsor, farmers and other interested like Market Committee might be the most appropriate forum, which can act as an arbitrator. For the purpose, appropriate legal provision will have to be made in the law governing the marketing of agricultural produce (APMC Act) to inter-alia provide for compulsory registration of all contract farming agreements and the procedure for settlement of disputes arising there from.

X. Indemnity in favour of producer

In order to protect producers land and properties it is essential that an indemnity is provided to him. The sponsor in any case shall not have any right whatsoever over the title or possession of the producers land.

OPTIONAL PROVISIONS -

XI. Cultivation /Input Specifications to be followed by the Producer

a)Land preparation

b)Nursery

c)Fertilization

d)Pest management

e)Irrigation

f)Harvesting

Explanatory note: When sponsor provide seeds, fertilizers and agrochemicals, they have the right to expect that those inputs will be used in the correct quantities. They also have the right to expect that farmers follow the recommended cultivation practices. Of particular concern is the possibility that farmers may apply unauthorized or illegal agrochemicals, which can result in toxic residues, with dramatic repercussions for market sales. It is therefore essential to spell out these clearly so that all contracted farmers adhere strictly to the project's input policies. Sponsors and their extension staff must make every effort to explain to farmers why the specifications and input recommendations must be followed.

XII. Insurance arrangements

a)Price Fluctuations

b)Pest Epidemic

c)Natural Calamities

d)Acts of God

e)Destruction of Assets

f)Loan Default

g)Production Loss

h)Buyer's Insolvency

Explanatory note: Agricultural investments always involve risk. The five most likely reasons for investment failure are poor crop management, climatic calamities, pest epidemics, market collapse and price fluctuations. The standard agribusiness approach to indemnify against quantity shortfalls is crop insurance. As the farming involved in a contract arrangement becomes technologically more advanced, the range of risks to which it is subject generally becomes more limited. In many cases some of the remaining risks can be managed with the assistance of insurance. Where there are fixed price contracts there is no apparent risk to farmers with regard to payment for their crops. If a market collapses, the sponsor should automatically shoulder the loss. However, if the sponsor becomes bankrupt, farmers could be permanently affected. Where contracts are on a flexible on spot-price basis the stability of farmers' incomes is always at risk. In theory, the proposal of crop and property insurance for farmers in contract farming ventures is appealing. However, a qualified risk analysis has to be made to determinate the economic advantages of insurance against the specific risks applicable to the particular crop. Some authorities classify the four main categories of crop insurance in order of "their comprehensiveness in terms of coverage of risks" as follows:

(i) Acts of Gods": This category encompasses natural disasters such as drought, floods, hail, storms, cyclones, lightning, insect plagues and disease epidemics that are beyond management control.

(ii) Destruction of specified assets. Tractors and farm implements can be insured against damage and theft. Insuring of curing kilns by farmers when growing tobacco

under contract is essential. If a contract-farming venture is well established, management can sometimes organize the insurance of non-contractual farm buildings and housing as part of the sponsor's total indemnity policies, reducing the cost of premiums to the grower.

(iii) Loan default: In almost all ventures, sponsors assume the liability of credits advanced by management to the farmer for the contracted crop. It is therefore important that advances do not accumulate into debts that the farmer cannot repay. Sponsors normally allow farmers who cannot repay advances because of climatic or other mitigating factors to extend their loans to the following seasons. Sponsors, of course, do have the option to indemnify their farmer loans against default through their own insurance brokers.

(iv) Production and income loss: Insurance against both production and income loss is expensive and complex. Production loss may be caused by a combination of factors that are difficult to insure against. To determine who is culpable when a crop is destroyed by insects is one example. Was it an "Act of God" or the failure of the farmer to take measures for pest control at the appropriate time, or was it the fault of management for not training and instructing the farmers in pesticide techniques? There are also social risks that could cause crop loss such as theft and animal damage.

XIII. Support Services To Be Provided By Sponsor :

The sponsor of large volume of produce may as part of the agreement provide one or more of the following services:

a)Coordination of production which includes identifying suitable production areas and forming farmers' groups;

b)Provision of extension advice on new cultivation/harvesting practices, appropriate use of chemicals, and efficient farm management;

c)Transfer of Technology leading to higher yield and/or improved quality;

d)Cropping schedules; and

e)Training and awareness programmes

XIV. Farmer- Management Forum

a)Organisation of Farmers' Association

b)Interaction with Associations

Explanatory note: Intermediary bodies that link management/sponsor and farmers for purposes of negotiation and interaction are necessary for all contracts. By creating farmer-management forums, sponsors can negotiate contracts with farmers either directly or through their representatives. The representatives should meet with management/sponsor periodically, but atleast three times in a season. The first meeting should be at the beginning of season in order to ratify the pricing structure and the season's crop schedules. A second meeting is advisable immediately before harvesting to discuss the crop progress and to confirm buying procedures. A final meeting to review performance at the end of harvest, which may coincide with the final payment to farmers. The farmers management forums include Farmers Associations, Farmers Co-operatives, Farmers Groups or any other organisation of the farmer by whatever name called (to be named in the agreement).

XV. Monitoring Quality and Yields

Each contract farming agreement must incorporate quality control and monitoring system suitable for its particular operation. Sponsor must prioritize monitoring procedures and decide how often they should be carried out, in what locations and who should be inspected and at what locations. Checking product quality can take place before, during and immediately after harvesting as well as at the time farmers grade their own production and when the produce reaches the company's processing or packaging facility.

Model Agreement for Contract Farming

(All clauses of the agreement are subject to the respective explanatory notes given under "contents of a model contract farming agreement")

THIS AGREEMENT is made and entered into at _____ on the _____ day of _____, 2003 between _____ age _____ residing at _____, herein after called the party of the First part (which expression shall unless repugnant to the context or meaning thereof mean and include his heirs, executors, administrators and assigns) of the one part, and M/s._____ a Pvt./Public Limited Co. incorporated under the provisions of Companies Act-1956 and having its registered office at _____ herein after called the party of the Second part (which expression shall unless repugnant to the context or meaning thereof mean and include its successors and assigns) of the other part.

WHEREAS the party of the First part is the owner/ cultivator of the agricultural land bearing the following particulars.

Village	Gut No.	Area in Hectare	Tehsil & Dist.	State

AND WHEREAS, the party of the Second part is trading in agricultural produce and also providing technical know-how in respect of land preparation, nursery, fertilization, pest management, irrigation, harvesting and alike things.

AND WHEREAS the party of the Second part is interested in the items of the agricultural produce more particularly mentioned in Schedule-I hereto annexed and at the request of the party of the Second part, party of the First part has agreed to cultivate and produce the items of agricultural produce mentioned in the schedule-I hereto annexed.

AND WHEREAS the parties hereto have agreed to reduce in writing the terms and conditions in the manner hereinafter appearing.

NOW, THESE PRESENCE WITNESSTH AND IT IS HEREBY AGREED BY AND BETWEEN THE PARTIES AS FOLLOWS :

Clause 1 :

The party of the First part agrees to cultivate and produce and deliver to the party of the Second part and the party of the Second part agrees to buy from the party of the first part the items of the agricultural produces particulars of the items, quality, quantity and price of the items are more particularly mentioned in the schedule I hereto annexed.

Clause 2 :

The agricultural produce particulars of which are mentioned in the schedule-I hereto will be supplied by the party of the First part to the party of the Second part within the period of _____ months/years from the date hereof.

OR

It is expressly agreed between the parties hereto that this agreement is for agricultural produce particulars of which are described in schedule-I hereto and for a period of _____ months/years and after the expiration of said period, this agreement will automatically come to an end.

Clause 3 :

The party of the First part agrees to cultivate, produce and supply quantity mentioned in the schedule-I hereto annexed to the party of the Second part.

Clause 4 :

The party of the First part agrees to supply the quantity contracted according to the quality specifications stipulated in Schedule I. If the agricultural produce is not as per the agreed quality standards, the party of the Second part will be entitled to refuse to take the delivery of the agricultural produce only on this count. Then

a) The party of the First part shall be free to sell the produce to the party of the Second part at a mutually renegotiated price

OR

b) In open market (to bulk Buyer viz. exporter/processor/ manufacturer etc.) and if he gets a price less than the pricecontracted, he will pay to the party of the Second part, for his investment proportionately less

OR

c)In the market yard and if the price obtained by him is less than contracted price, then he will return proportionately less for theparty of the Second investment.

In the event the party of the Second part refuses/fails to take the delivery of the contracted produce for his own reasons then the party of the First part will be free to sell the produce in the open market and if the price received is lower than the contracted price the difference will be on account of the party of the Second part and the party of the second part shall pay the said difference to the party of the First part within a period of _____ days from asserting the said difference.

Clause 5 :

The party of the First part agrees to adopt instructions / practices in respect of Land preparation, nursery, fertilization, pest management, irrigation, harvesting and any other, as suggested by the party of the Second part from time to time and cultivate and produce the items as per specifications mentioned in the schedule-I hereto.

Clause 6 :

It is expressly agreed by and between the parties hereto that buying will be as per the following terms and buying slips will be issued immediately after the purchase

Date	Delivery Point	Cost of Delivery

It is further agreed that it will be the responsibility of the party of the Second part to take into possession of the contracted produce at the delivery point agreed after it is offered for delivery and if he fails to take delivery within _____ period then the party of the First part will be free to sell the agriculture produce contracted as under :

a. In the open market (bulk buyer viz. exporter/ processor/ manufacturer etc.), and if he gets a price less than the price contracted, he will pay to the party of the Second part for his investment proportionately less

b. In the market yard, and if the price obtained is less than the contracted price then he will return proportionately less to the party of the Second part for his investment.

It is further agreed that the quality maintenance in transit will be the responsibility of the party of the Second part and the party of the First part shall not be responsible or liable for the same.

Clause 7 :

The party of the Second part shall pay to the party of the First part the price/rate mentioned in Scheduled I when his crop has been harvested and delivered to the party of the Second part after deducting all outstanding advances given to the party of the First part by the party of the Second part. The following schedule shall be followed for the payment.

Date	Mode of Payment	Place of Payment

Clause 8 :

The parties hereto shall insure the contracted produce mentioned in Schedule-I hereto, for the period of _____ against the risk of losses due to acts of Gods destruction of specified assets, loan default and production and income loss and all other acts or events beyond the control of the parties, such as very low production caused by the serious outbreak of a disease, epidemic or by abnormal weather condition, floods, drought, hailstorm, cyclones, earthquakes, fire or other catastrophes, war, acts of Government, action existing on or after the effective date of this agreement which prevent totally or partially the fulfillment of the obligation of the farmer. Upon request, the party of the First part invoking such acts shall provide

to the other party confirmation of the existence of facts. Such evidence shall consist of a statement of certificate of the appropriate Governmental Department. If such a statement or certificate cannot reasonably be obtained, the party of the First part claiming such acts may as substitute, thereof, make a notarial statement describing in details the facts claimed and the reasons why such a certificate or statement confirming the existence of such facts. Alternatively, subject to the mutual agreement between the two parties, the party of the First part may fill his quota of the produce through other sources and the loss suffered by him thereby due to price difference, shall be shared equally between the parties, after taking into account the amount recovered from the insurance company, The insurance premium shall be shared equally by both the parties.

Clause 9 :

The party of the Second part hereby agrees to provide following services to the party of the First part during the period of cultivation and post harvest management, particulars of which services are as follows :

1.

2.

3.

4.

Clause 10 :

The party of the Second part or it's representatives agrees to have regular interactions with the farmers forum set up/named by the party of the First part during the period of contract.

Clause 11 :

The party of the Second part or it's representatives at their costs shall have the right to enter the premises/fields of the party of the First part to monitor farming practices adopted and the quality of the produce from time to time.

Clause 12 :

The party of the Second part confirms that he has registered himself with the Registering Authority _____ on _____ and shall pay the fees in accordance with the law prevailing in this regard to the Registered Authority which has jurisdiction to regulate the marketing of agriculture produce which is cultivated on the land described _____

OR The party of the Second part has registered himself on _____ with a single point registration Authority namely _____ prescribed by the State in this regard. The fees levied by the respective Registering Authority shall be borne

by the party of the Second part exclusively and will not be deducted in any manner, whatsoever, from the amounts paid to the party of the First part.

Clause 13 :

The party of the Second part will have no rights whatsoever as to the Title, Ownership, Possession of the land/property of the party of the First part nor will it in any way alienate the party of the First part from the land property particularly nor mortgage, lease, sublease or transfer the land property of the First party in any way to any other person/ institution during the continues of this agreement.

Clause 14 :

The party of the Second part shall submit true copy of this agreement signed by both the parties within a period of 15 days from the date of execution thereof with the _____ market committee/ registering authority as required by the APMR Act / any other registering authority prescribed for the purpose.

Clause 15 :

Dissolution, Termination/Cancellation of the Contract will be with consent of both the parties. Such dissolution or termination/cancellation deed will be communicated to the registering authority within 15 days of such dissolution, termination/cancellation.

Clause 16 :

In the event of any dispute or difference arising between the parties hereto or as to the rights and obligations under this agreement or as to any claim, monetary or otherwise of one party against the other or as to the interpretation and effect of any terms and conditions of this agreement, such dispute or difference shall be referred to arbitration authority constituted for the purpose of Authority declared by State Government in this regard.

Clause 17 :

In case of change of address of any party to this agreement, it should be intimated to the other party and also to the Registering Authority.

Clause 18:

Each party hereto will act in good faith diligently and honestly with the other in the performance of their responsibilities under this agreement and nothing will be done to jeopardize the interest of the other.

In witness whereof the parties have signed this agreement on the ____ day, _____ month and _____ year first above mentioned.

SIGNED, SEALED AND DELIVERED by the)

withinnamed 'PARTY OF THE FIRST PART')

in the presence of .....)

1.....)

2.....)

SIGNED, SEALED AND DELIVERED by the)

withinnamed 'PARTY OF THE SECOND PART')

in the presence of .....)

1.....)

2.....)

Schedule I

Grade, Specification, Quantity and Price Chart

Grade	Specification	Quantity	Price/Rate
Grade 1 or A	Size, Colour, Aroma etc		
Grade 2 or B			

Chapter 10

Summary, Conclusions, and Recommendations

Farmer Organisation for Organic

The case studies bring out the organizational variety in organic production and marketing activity. So far as growers are concerned, there are two sectors of organic product sector in India. One, driven by export market oriented chains which prefer to work with larger independent producers and the other, domestic market driven chains which work with small producers directly or through NGOs. The organic growers were organized into projects by different agencies like private companies, NGOs, government agencies, and farmers' organizations in different crops and regions of India. Where as organic cotton projects were run by private companies as well as farmer groups and NGOs, the organic basmati paddy was dominated by private companies almost totally with only one state agency being there. Similarly, processed products initiatives were driven by private players. Though the private companies do help producers to link up with market, they also have problems in terms of passing on fair share of benefits of organic trade to producers and also technology and learning for self reliant farmer group activity later on. They tend to make farmers dependent on themselves and exercise control except in cases where companies are into fair trade or are more ethical as business entities.

On the other hand, though NGOs are good at farmer organisation and extension for organic production, they face difficulties in marketing of organic products due to lack of orientation and ideological reasons which include not promoting too much commercialization. But, in India, a trend which emerged from case studies is that NGOs are increasingly partnering with private sector players who are better at marketing. This is bringing synergy in efforts to promote organic farming and market as the two are relatively more familiar and specialized in the two activities respectively. Thus, they become suppliers to private processing and marketing agencies (like Organic Chetna to textile mills and many NGOs to Ion Exchange) and even domestic retail chains (INHERE to Fab India) and co-ordinate production, certification and delivery for the contracting agency. But, some NGOs are also found

to perpetuate their presence instead of handing over to farmer groups over time as seen in case studies and also reported by IFAD (IFAD, 2005).

The state agencies, though tend to be pro-poor and small grower in their approach due to their mandate of agricultural development at large, often suffer from lack of professionalism and skills in marketing. But, UOCB was very innovative in organizing the entire organic project and providing certification and marketing support. But, change of guard and responsible persons at frequent intervals does create problems in accelerating the project growth as seen in case of UOCB. It also proactively encourages farmer organisation and sustainability of such groups.

Farmer participation

The newly emergent organic produce supply chains across Asia have also been found to be excluding small producers due to reasons of high certification costs, smaller volumes they produce, and tighter control by the chain leaders in the absence of any local market outlets for the organic producers (Raynolds, 2004). This is no different in India as revealed by the case studies across crops and agencies, with the exception of govt. and development agencies.

In fact, this is the result of the dominance of organic produce markets in the West by supermarkets, for which organic produce is targeted. Today, Nike is the largest consumer of organic cotton in the world. In 2003, 3 million pounds of the 120 million pounds of cotton it consumed was organic. Nike projects that in 2004, approximately 30% of all Nike apparel cotton materials contained some percentage of organic cotton, and 47% of all cotton-containing Nike apparel garments (more than 48 million) were manufactured with materials that contained a minimum of 5% organically grown cotton. Nike's goal is for all of its cotton apparel to contain at least 5% organic cotton by 2010. Retailer Coop Switzerland is the second-largest consumer of organic cotton, using 2 million pounds in 2003 (Speer, 2005).

The important issues in organic produce chains are the exclusion and inclusion of primary producers by the buyers who may be exporters or importers or supermarkets, product and production standards, and timelines for produce delivery. The farmers are the weakest link in the chain. They are not ensured of their sustainable incomes in these chains which function in the absence of state and the presence of increasingly globalised markets. Most of the private players work mostly with large and medium land holders or resourceful farmers. They exclude the small and marginal growers everywhere except when it is a developmental project run by an international or national agency. In this, they are no different from conventional produce supply chains. This is corroborated by another study of organic farming in India and China as well (IFAD, 2005) which finds that the early adopters tend to be more resourceful, better skilled, and better educated and could take higher risk due to their resourcefulness. Further, some of the practices being followed are no different from that in the conventional produce supply chains like standards, prices, and compliance conditions.

Market access for small producers depends on: a) understanding the markets, b) organization of the firm or operations, c) communication and transport links and d) an appropriate policy environment. The exclusion of small farmers from participating in food chains does not appear to be, in any way, automatic. There have been cases of success when public or private assistance to the growers in terms of technical assistance and supply of input credit was made available (Reardon and Berdegue, 2002). In some places in Brazil, small farmers have gone in for collective tanks to meet the scale requirement though the large farmers will have an advantage as they do not face the transaction cost involved in collective use of physical assets. The dairy companies and cooperatives encourage the use of collective tanks, even by financing or facilitating credit for milk producers in some cases (Farina, 2002).

Certification

Since certification was with the project organizing agency (private player) due to the fact that it paid the cost of certification, the growers were locked into the contract due to the firm specific fixed investments they had made by going organic, and thus, were not able to sell elsewhere without certification. This can undermine the farmer or farmer group independence and autonomy as happened recently in Uttaranchal with basmati growers who decided to shift to another agency to avoid monopsonistic situation and avail of better prices for output and inputs, but were not able to do so successfully as they had no control over certification process which was with the company. The certification agency refused to entertain these farmers for another certification as it wanted a no objection certificate from the previous company and from the certifying authority in India (APEDA) (Srinivasan, 2006). Therefore, the question of who owns the certificate is crucial. This raises a governance issue as it limits the market options for growers to those dictated by the certificate owner and thus diminishes their interest and commitment to organics. Though the organizer pays certification fees but they are not so high as to not give any right to the grower over his farm's certification as most of the conditions of certification are adhered to by the grower on the farm.

To take care of this issue, either farmer or farmer group should pay 100% of the cost of certification or share it with some government or development agency where the certificate will be with the farmer or the group, not the agency or the chain organiser. Further, though the farm and the production system is certified organic, it does not ensure product quality i.e. product being organic totally as it is the process which is certified not the product. The product may still contain chemical or pesticide residue or any other non-organic elements.

Domestic Market certification

Certification should address the following issues in domestic market:

- Certification geared to local markets – immediate felt need
- Certification that is "scale neutral" – relevant to small and marginal farmers

- Certification that is “inclusive” – does not leave out people who have been cultivating organically through the years
- Certification system that does not handicap small farmers in terms of requirement of maintenance of records and audit trail etc. (Balsubramnian, 2005).

There are also alternative certification systems which can provide easy access to organic markets. These are:

- Teikei system in Japan
- Organic Bazaar system in India
- Ecovida in Brazil
- The Certified Naturally Grown system in USA
- Masipag in Philippines

Their main principles, values, and ideology include:

- Community participation
- Local standards and norms
- Co-responsibility of the guarantee
- Documentation and transparency
- Rely on NGO or Government support.

For these standards to succeed, policy support is required in terms of:

- Local standards / or norms conceived by stake holders
- Grass root orientation
- Simplified documentation and management systems
- Local market linkages
- Biodiversity conservation
- Organic seeds
- Gender justice (Daniel, 2005).

Nature of Contracts and the farmer and the labour interest

Most of the organic production organizers especially private players use contract farming system to organize production at the grower end. There are many variants of the contract farming system like direct contracts, indirect contracts or only supplier contracts. But, the contracts protect company interest at all costs to the farmer and do

not cover farmer's production risk e.g. crop failure, retain the right of the company to change price, and generally offer prices which are based on open market prices for conventional produce. There is absence of independent price discovery in organic produce sector so far as the primary producer is concerned despite the fact that the organic consumer market has its independent prices.

All organic produce buyers offer conventional produce market price based prices to their growers. The method involves producer cost plus method or conventional produce market price plus premium with few exceptions like Jatan (an NGO) which had fixed margin of seller (itself, 20%). For in-conversion produce, it is only conventional produce market price which is paid to the grower. This is a serious issue as even a significant premium over market price may not help a farmer if open market prices go down significantly which is not uncommon in India. There is a need to reduce the vulnerability of growers due to fluctuations in market prices by offering minimum purchase prices, not market based premiums as is being done by the companies now. The essence of contract farming, among other things, is a pre-agreed price which reduces farmer's market risk. But, conventional produce market price based price no way ensures the farmer risk. So far as farmer default is concerned, social and peer pressure and group contracts can be used to prevent defaults besides improving the ICS. But, even in Netherlands, the organic milk prices are linked to price of standard milk and the attempts to delink the two have not been successful because the processors are reluctant (Tacken and Vlieger, 2004). Thus, the issue of what is fair price for the primary grower in an organic produce chain remains as there is little transparency in pricing and costing of operations when private players are the organisers of organic projects (IFAD, 2005).

An analysis of the labor conditions under contract farming system of organic supply chains where there is higher use of labour in fields shows that the labor issues in contract farming are still not addressed. This is an important issue if fair trade markets are to be attended. The organization of labor is another important measure to prevent or eliminate some of the ills of contract farming system for labor. The associations of contract farm labor can also be used for monitoring wage and work conditions. In fact, there could be legal provisions to involve labor representatives when companies and growers/growers' groups decide on labor and wage issues. As a civil society

intervention, there could be codes of conduct for farmers for use of labor which can be enforced by contracting agribusiness firms who should also work towards more ethical and human labor standards constantly.

Role of the Corporate Sector

In the times of competitive international trade, the processing and marketing links in the supply chain, especially super markets, can play an important role as they will increasingly convey and fashion the changes needed in the supply chains due to their own selfish interest in organics in terms of ethical trade image, differentiation from competitors, new market segments, and attracting consumer loyalty. The super markets have the purchasing power, drive, dynamism, adequate logistics, omnipresence, efficiency, quality management, and communication power though they also have their own agenda and practices like ethical trade inertia, dumping, and technical barriers which may not be in tune with that of the organic producers and other players (Haest, 2003). The processing/marketing firms should go the organic way proactively. This will be similar to agricultural input firms moving from chemical to organic inputs instead of perceiving organic as a threat. The agribusiness firms should look at organic farming and trade as an opportunity which is in accordance with the larger developmental goal of sustainability. This is one more historic opportunity for the industry to contribute to human progress substantially as they are best placed to tailor the chain organically. They should implement and promote Good Farm/Agricultural Practices. They can also work with chain partners to identify the key information needs of consumers covering production, monitoring, and processing, and trade. On the other hand, they should also adhere to national, state, and local regulations regarding environment, labour, and food/fibre safety. But, there is need to watch as indiscriminate use of this route could also bring in many of the ills of the industrial agriculture like no space for marginal producers and compromise on the primary producer interest.

They should also experiment different ways of including small growers into their fold. Many attempts including offering differentiated contracts under contract farming schemes to include small farmers failed in Mexico though firms had no option but to contract with small vegetable growers. A few firms succeeded in including small

farmers in their contract farming projects only when they also employed the farmers' family members in their processing units, used local intermediaries to supervise small growers, and/or limited the small grower contracts only to areas close to the highway, besides the other reasons like the small growers being lower cost and more efficient than the firm's own farms, their poor access to alternative outlets for produce and source of credit, and having low labour and land opportunity cost. These measures reduced the information asymmetry between the growers and the firm and the transaction cost of dealing with small growers (Warning et al, 2003).

In domestic market, the new and small players also need to treat organic as an 'add on' business with other businesses and brands to begin with so that it becomes economically viable without incurring much direct costs. Segmenting the market (certified v/s natural, personalised v/s distant, processed v/s loose/raw) could also be useful to focus on targeted segments effectively. Franchising is another route for faster spread and better marketing in partnership with local players (franchisees). It is also important to offer complete range to attend to the market effectively. For this, agencies could try product exchange and network for marketing instead of each one of them grappling with marketing. Intermediate products market (selling through other products/part organic) could be another way to expand the market for organics. Joint branding with others in the food or fibre sector can be used to benefit from market strength of the existing market players in conventional markets.

Besides the resources and technology which determine performance of contract farming, it is the relationship among state, companies, and farmers, which shapes formal and informal institutions and gets mediated by them, that matters (Ornberg, 2003). In fact, the companies should proactively involve NGOs into their contract farming operations and even organise farmer co-operatives or groups for more sustainable contract farming programs (Mayers and Vermeulen, 2002; Pingali and Khwaja, 2004). The groups or farmers' organisations like co-operatives not only lower transaction costs of the firms but also lower input costs for the farmers and give them better bargaining power. In contract arrangements with small producers in west African countries, the cotton companies started transferring some of the operational or functional responsibilities like distribution of inputs, equipment orders, and credit repayment management, to the village associations in the 1970s itself. They provided

these associations with management skills for these tasks. The companies relied on traditional village authority structures for organising the associations but limited the associations to one per village to simplify company purchasing, delivery and marketing procedures. This arrangement accounted for a significant part of each cotton company's success (Bingen et al, 2003). But, unfortunately, contracting companies have not been very keen to organise or support co-operatives in India.

In export markets, it is also necessary to establish incentives/penalties system for better/poor quality of organic produce. Adoption of HACCP and better quality monitoring systems is a much needed step in this effort. Better vertical co-ordination mechanisms like contract farming, co-operative-corporate alignment is the need of the hour to achieve competitiveness even in organic produce markets. It is here that New Generation Co-operatives (NGCs) can come in handy as they are business oriented. It is also important to focus on ethical and fair trade issues proactively as they may be even more important than organic to sell in export markets.

Global buyers can have a role to play in assisting suppliers to improve practices and become compliant. However, such support rarely goes down the buyer's value chain to smaller sub-contractors. Moreover, pressures from buyers to meet standards often conflict with their demands on suppliers to lower prices, improve quality and reduce lead times. The standards need to be flexible and interwoven with local conditions if they have to benefit poor workers. They must also involve local stakeholders who reflect the interests of workers in the process of standards setting and monitoring. The policy challenges on standards include standard setting, monitoring compliance, providing assistance to achieve compliance, and sanctions on non-compliance. Much depends on how standards are implemented, monitored, and verified (IDS, 2003).

Further, companies should promote group contracts with the intermediation of local NGOs and other organisations and institutions so that contractual relationships are more durable, enforceable, and fair. An insurance component in farming interventions is must to protect the farmer interest and it is noted that some companies are already doing it. But, the most important thing is to ensure market for the farmer produce at better price under these agribusiness projects.

Finally, it is the trust between farmers and processors that is important for the realignment of the chain (Heron, 2003). Trust has been defined as the willingness to rely on an exchange partner in whom one has confidence. Trust is the function of relationship specific investments, satisfaction with product quality, prior experience, and importance of input. Trust is developed by a constant and detailed exchange of information which reduces the uncertainty of performance. In the case of farmers, a reciprocal purchase agreement has positive relationship with the farmer's trust in the buyer (Batt and Rexha, 1999). The trust can be built only if contracts are fair, protect farmer from risk of crop failure and deliver remunerative prices or share surplus with the grower.

Regulation of Supply Chains

The procurement practices of supermarkets and large processors have a big impact on, and are an important challenge for farmers. The down stream segments of the chain (supermarkets and large processors) through their coordinating institutions and organizations such as contracts, private standards, sourcing networks and distribution centers are reformulating the rules of the game for farmers and first stage processors (Reardon and Berdegue, 2002).

It is important to promote good business practices that optimize retailer-supplier relations, protecting both sides. This can be initiated by establishing or improving contract regulations and business rules of practice some of which are already available in the form of legal acts in the US and Argentina. These practices can also be forced by private sector codes of practice. However, regulations do not ultimately change the economic forces under which the supermarkets operate and the changes in procurement systems are driven by these forces. These changes and the basic requirements they impose on growers are conditions which will have to be met if the growers are to be able to tap the powerful market of the supermarkets. Therefore, it is crucial that government and donor agencies help small farmers and entrepreneurs to make the investments in equipment, management, technology, commercial practice and the development of strong and efficient organizations to meet those requirements. There have been such attempts in Brazil and Guatemala (Reardon and Berdegue, 2002).

Though contract farming is the norm even in organic produce supply chains, it is difficult to police contracts due to the multiple variables involved in a farming contract like output price, input prices and supply, payments, and quality standards (Glover, 1987; Wolf et al, 2001). Therefore, if the firm really wants to manipulate/sabotage a contract, there are dozen ways to do it. A government can not really do much to police a contract, and it should not impose contract on an unwilling firm or in an inappropriate situation. Further, the state/government may not always stand by the small growers due to the pressure from the agribusiness interests, and may suffer from the conflicting objectives of its various agencies. Since policy interventions can not really change the outcome of a fundamentally unworkable situation and the relevance of contract farming for small farmer development, it is better to have more realistic expectations about the policy intervention effect and define an appropriate niche for smallholder contract farming in terms of crops and markets. It is better to plan carefully *ex ante* for contract farming based on earlier experiences elsewhere (Glover, 1987). But, contracts need to be transparent and require frequent and independent scrutiny so that they remain competitive both with similar contracts and with open market transactions. Wide publicity of contract terms can help to stimulate competition.

But, still, the state/government can play both regulatory and enabling/developmental role in contract farming. Legal protection to contract growers as a group must be considered to protect them from ill effects of contracting practiced by supply chains drivers. There are cases of legal protection given to subcontracting industries in Japan in their relations with large firms. These laws specify the duties (to have a written and clear terms contract with the subcontractor) and forbidden acts for the large parent firm. The latter include refusal to receive delivery of commissioned goods, delaying the payment beyond agreed period, discounting of payment, returning commissioned goods without good reason, forced price reduction, compulsory purchase by subcontractors of parental firm's products, and forcing subcontractors to pay in advance for materials supplied by the parent firm. These provisions are monitored by the Fair Trade Commission. Interestingly, most of the violations by parent firms were on the written form and clear terms of the contracts (Sako, 1992). If contract farming is only the flexible production systems prevalent in industry applied to farm

production, then it is only logical to extend such legal provisions with necessary modifications to farming contracts. In farming sector per se, there is the Model Producer Protection Act, 2000 of Iowa State in the USA which requires contracts to be in plain language and disclose material risks, provides a three days' cancellation period for the producer to review and discuss production contracts with their advisors, provides for producers to be first priority lien for payments due under a contracts in case of contracting company bankruptcy, protects against undue cancellation of contracts by companies and prohibits 'tournaments' (contracts where compensation to grower is determined by his performance relative to others) (*www.flaginc.org/pubs/poultry/poultrypts*.)

In India, the legal reform process is already under way with the Union Government enacting the Model Act for the state Agricultural Produce Marketing (Development and Regulation) Act, 2003 and many states (8 as suggested, and 10 partially like Gujarat, Haryana, Karnataka, Maharashtra, U.P. Delhi and Chandigarh permitting only direct marketing/contract farming or private/co-operative markets (only Karnataka)) carrying out the amendment in their Acts. This amended act deals with setting up of private markets, selling of produce by growers outside the APMCs (regulated markets), setting up of direct markets, specialized commodity specific markets, regulation and promotion of contract farming, provision for agencies and measures to promote quality, standards, and alternative markets, and public-private partnerships to facilitate more and better linkage between firms and farmers (GoI, 2004). The amended APMC Act has certain mandatory and optional provisions regarding contract farming wherein mandatory ones include aspects like who can undertake contract farming (type of sponsor and of contract grower), details about the land under contract, duration of contract, description of farm produce, other contract specifications like quantity i.e. acreage, entire crop, or fixed quantity, produce quality specifications and penalties for lower quality like rejection, or lower price, crop delivery arrangements i.e. at farm/factory gate/collection centre and transport arrangements, pricing and credit mechanisms, farmer asset/land indemnity, compulsory registration of contracts with the local authority and the procedure for dispute resolution. On the other hand, the optional features include those relating to farm practices, joint crop insurance, support services to be provided, farmer-

management forum for monitoring of contract system performance, and monitoring of quality and yields.

The model contract agreement is quite fair in terms of sharing of costs and risks between the sponsor and the grower (GoI, 2003). But, it leaves out many aspects of farmer interest protection like delayed payments and deliveries, contract cancellation damages if producer made firm specific heavy investments, inducement/force/intimidation to enter a contract, disclosure of material risks, competitive performance based payments, and sharing production risks. Also, there are state level variations in the amended Acts and the spirit has been diluted. For example, in Gujarat, the amended Act makes the APMC as a party in the tripartite contract stating the logic that APMCs have a useful role as facilitator as they have long standing relationship with farmers and can disseminate the contract farming concept and practice besides monitoring its practice. It makes the Gujarat State Agricultural Marketing Board (GSAMB) and the local APMC as the registering authority for contracts. The MD, GSAMB will examine the contract for its fairness to the farmers and can refuse to register the same if found inadequate in protection of the farmer interest. It is also the arbitrator in case of disputes. The registration costs Rs. 200 for the sponsor. Though the central model Act exempts contract procurement from market fee, the Gujarat Act makes it mandatory to pay the prescribed cess to the concerned APMC or in case of multi-location operations, to the GSAMB which will apportion it to the concerned APMCs. Though the monitoring role of APMC is desirable, but making it a party to the contract is totally unnecessary and undesirable as that is not the best way to protect the farmer interest, if that, at all, is the logic for giving the role of a party to the contract to the APMC in contracts between sponsors and the growers. Further, it is not known how far the model contract agreement will be adopted by the agencies unless it is conditionality to avail certain other incentives or policies. In Thailand, even after three years of its notification, the standard agreement was used only by two companies (Singh, 2005d).

Sustainability

For the longer term benefit and sustainability of growers, it is important to make sure that the higher organic incomes are used for making investments on the farm. For

those practicing sustenance farming by organic methods by default, there is need to enhance yield and net returns without significant increase in chemical inputs with systems like LEISA as against certified organic as they may not need market for their produce as it is meant for self consumption only. There is also need to combine organic with fair trade as that can bring better income for really less privileged like agricultural labour, small and marginal farmers, and the community.

Most of the projects were working with single crops focus. Though this may be important to gain some specialization in the market and obtain a foothold in terms of volumes, the producers need market assurance for the entire crop cycle around the year. Therefore, companies should develop market options for organic rotation crops and improve yields of rotation crops by better R&D and extension. Rather, they should move away from the Crop Centric system to Diversified Farming System. The incentives provided by promoting agencies still maintain the crop-centric approach which needs to be changed.

Role of NGOs and Farmers' Organizations

Institutional support is must for adoption and sustainability of organic projects. Farmers need access to technology, financing for certification and marketing (IFAD, 2005). NGOs and farmers' organizations have extensive experience with participatory technology development methodologies in sustainable and organic agriculture. They play a key role in capacity-building, the development of local inspection and certification, as well as the development of producer networks, which is indispensable for small-scale organic farmers to achieve economics of scale.

The main requirements of small farmers in this changing environment are better access to capital and education. Management capacity is as important as physical capital and most difficult thing to provide. Further, collective action to deal with scale requirements needs to be designed to satisfy new product and process standards or to avoid exclusion from the supply chain. Collective action through cooperatives or associations is important not only to be able to buy and sell at a better price but also to help small farmers adapt to new patterns and much greater levels of competition (Farina, 2002). The small farmers require professional training in marketing and in

technical aspects of production. There is also need to strengthen small farmer organizations and provide them technical assistance to increase productivity for the cost competitive market, provide help in improving quality of produce, and to encourage them to participate more actively in the marketing of their produce in order to capture value added from in the supply chain. Finally, the problem of financing the small producers needs to be tackled by finding innovative ways to provide finance (Schwentesius and Gomez, 2002).

Though we did not study any major farmer organization dealing with organic produce, there are a few such agencies in India like VOFA, TOFA, and OSGF which have been in existence and serving their members well though they have faced difficulties in marketing. These and such organizations in organic produce sector need to move to new generation co-operative (NGC) model to prepare for international and domestic competition and do better marketing and business management in competitive markets. Existing small farmer organizations or associations that are already engaged in sustainable agriculture constitute potentially powerful platforms for the scaling up of organic production among smallholders. Similarly, producer co-operatives especially New Generation Co-operatives (NGCs) which work with stakeholder members who contribute some equity, and have contractual relations with members for better business co-ordination, can be used to organize small scale primary producers. Since organic conversion and sustainability is prolonged, involves learning, and certification and marketing are challenges, local organizations are required to maintain continuity. These organizations can also reduce input and transaction costs and help get better prices for organic produce. In fact, farmer organizations should be encouraged to take up responsibilities like quality management, some extension services and input production, ICS, and certification in the supply chain in order to build local capability.

The farmers' organisations and NGOs are also needed to monitor and negotiate more equitable contracts with exporting and processing agencies which are dominant organisers of the organic chains and will remain so. These types of organisations have been able to secure the standardisation of contracts and their scrutiny by a government agency in the USA (Wilson, 1986) and the bargaining groups have negotiated input purchase and output sale collectively (Welsh, 1990). In Japan as well, farmers have

managed their relationships with companies well through co-operatives (Asano-Tamanoi, 1988). Producers' organizations amplify the political voice of smallholder producers, reduce the costs of marketing of inputs and outputs, and provide a forum for members to share information, co-ordinate activities and make collective decisions. Producers' organizations create opportunities for producers to get more involved in value adding activities such as input supply, credit, processing, marketing and distribution. On the other hand, they also lower the transaction costs for the processing/marketing agencies working with growers under contracts. Collective action through cooperatives or associations is important not only to be able to buy and sell at a better price but also to help small farmers adapt to new patterns and much greater levels of competition (Farina, 2002).

Role of the State and the Development agencies

The state and development agencies need to internalize the fact that increasingly product markets will mean supermarkets. Therefore, market-oriented programmes and policies will indeed be supermarket oriented. If, in a given country, a few chains command majority of the food sector, then development policies and programmes need to learn how to deal with this handful of big companies. The development agencies also need to realize that small farmers and entrepreneurs have to gear up quickly to compete in the new markets that are spreading over most of the food economy. The local market niches are disappearing and the distinction between global and domestic market is getting blurred. The government and the donors will have to focus their programmes not just on exports but also on the growing market of the local supermarkets. It is important to promote good business practices that optimize retailer-supplier relations, protecting both sides. This can be initiated by establishing or improving contract regulations and business rules of practice some of which are already available in the form of legal acts in the US and Argentina. These practices can also be forced by private sector codes of practice. Regulation of super market chains to control or mitigate their market power can be a potential tool to ensure the presence of small growers in value chains as seen in the case of banana trade regime in pre-WTO period in the EU policy, single channel (monopoly) exports by producer bodies in some exporting countries like South Africa, and regulation of domestic import markets in France (Gibbon, 2003).

So far as the role of the government in the commodity chain is concerned, it can proactively help the stakeholders in the chain to identify the opportunities and threats in the global commodity chains. It can also assist producers to enter the chains (Kaplinsky, 2000). Thus, there is need to promote/encourage farmer groups for contract farming as was the case in Thailand where besides contract grower groups, the potato growers' co-operative also dealt with a multinational contracting company on behalf of its members. Group contract farming proves beneficial for both growers and companies (Singh, 2005e) through there may be difficulties in enforcing collective actions due to group heterogeneity, agency resistance to such actions, and making members adhere to group norms in the absence of any legal authority with such collectivities (Glover, 1987).

There is also need to strengthen small farmer organizations and provide them technical assistance to increase productivity for the cost competitive market, provide help in improving quality of produce, and to encourage them to participate more actively in the marketing of their produce in order to capture value added in the supply chain. Finally, the problem of financing the small producers needs to be tackled by finding innovative ways to provide finance (Schwentesius and Gomez, 2002).

What is needed from the state are supportive and facilitative policies at various levels of government like central, state and local levels as evident in some states of India like Uttaranchal and Karnataka, especially in conversion stages where extension support, subsidized input supply, marketing information and certification support come handy. The government agencies can help the organic producers by way of preferential purchase of such produce and products for public programs like noon-meal schemes, hospitals, and other such public places including some government offices. In Some European countries, it has been already done and has been quite helpful to encourage demand for organics and to spread awareness about the organic products (IFAD, 2005). Small organic producers and NGOS are best placed to locally meet such demand i.e. from local schools and hospitals.

The steps needed for promoting organic farming systems include focus on domestic market focus like 'green foods' market in China (Ghosh, 2004), certification or

conversion support or subsidy as done in California (upto 70%) by the USDA in 2001 and in the EU for conversion to or continuing with organic production under the EU-agri environment programme since 1993 (Klonsky and Smith, 2002; Padel et al, 2002; Ghosh, 2004), and promotion of market mechanisms like Mumbai Grahak Panchayat which had dedicated consumer groups who place advance orders. In organic produce chains, group certification by public or development agencies can provide a chance for small farmers to take up organic cultivation. The government agencies should not share the cost of certification with private agencies operating in organic sector if the purpose is to empower the growers.

But, it is market oriented programmes which are more sustainable as was the case in Denmark (Padel et al, 2002). Targeting institutional market i.e. hotels, hospitals, airlines and railways, to begin with, is an important strategy for promotion of market for the organic produce in the domestic market. NGOs can also be roped in for market creation as they have credibility for such products. Further, home delivery can prove effective tool in high end segment of the market. Tying up of the organic products with other environmental friendly products can also help (Gupta, et. al. n.d.). Regular supply can also come in handy for promotion and market building. Further, there could be common storage and processing centres to tackle the small volumes problem.

On the production side, there is need to encourage and promote use of organic inputs like bio-fertilisers, bio-pesticides and organic manure and even farm practices like IPM and INM. It has been found that even in agriculturally advanced states like Haryana, even farmers who were exposed to IPM practices by various agencies had never used bio-pesticides, not even neem. The main reasons for very low acceptance of IPM were found to be lack of awareness and skills, and lack of faith in the practice itself besides cumbersome and time consuming nature of the practices. The predominant dependence of farmers on dealers for advice on pest control took them further away from these inputs and practices. Similarly, very few farmers used bio-fertilisers due to lack of awareness and poor quality of product (Alam, 2000). Here, NGOs and farmers' organizations can play an important role. There are problems of quality and shelf life in such inputs and lack of economies of scale in selling such inputs. Besides, subsidies on chemical inputs depress the market for bio-inputs.

The organic movement is promoting market development as a more sustainable way of maintaining an economic incentive for farmer conversion. Though the retail chains may not currently account for the largest volume of organic sales, they are the venue where existing non-buyers can be converted to buyers of organic foods. Therefore, retail chains will play an important role in boosting demand for organic goods and in advancing the cause of the organic movement (Ritcher, 2005). The tie up with existing food chains/outlets could help mainstreaming the organic produce.

Above all, the state needs to correct the anti-organic and anti-small producer bias in its public policies. For example, chemical inputs are subsidized more or equally well along with organic and there is no MSP for organic produce. Further, the government of Punjab through PAFC has been reimbursing extension cost to the contract farming agencies/facilitators at the rate of Rs. 100 per acre. But, doing it irrespective of the size of holding of the contract growers defeats the purpose as it does not ensure that small and marginal farmers who can not afford to pay for extension and need to be brought into the contract system are included. Similarly, the Ministry of Food Processing industries has been providing an incentive since the beginning of the 9th Plan in the form of a reimbursement of five per cent of the value of raw materials procured through contract farming with farmers with a maximum ceiling of Rs. 10 lakh per year for a maximum of three years with the condition that any organization (private/public/co-operative/Non-Government organization (NGO)/joint venture/assisted) should work with at least 25 farmers under contract for at least three years (MFPI, 1998). Contract farming will work for organics only if the current system of procurement based on Minimum Support Price (MSP) is changed in favour of organic crops because it provides a powerful economic incentive to prolong the conversion to organic.

Government should also play an enabling role by legal provisions and institutional mechanisms, like helping farmer co-operatives and groups, to facilitate smooth functioning of contract system, and not intervene in CF directly. Besides, there could be enabling policies like availability of credit that is friendly (or at least neutral) towards organic cultivation, crop insurance and other supportive measures, and subsidies that are friendly (or at least neutral) towards organic farming

(Balasubramanian, 2005). For example, in Benin in Africa, the yield of organic cotton per hectare is lower, but this is compensated in two ways. Firstly, organic farmers do not have to pay back input credit loans (on average 30% of gross conventional cotton income). Secondly, they receive a premium of 20% above the local conventional price. The producer price is set at the start of the season. The purchase of the entire organic cotton crop is guaranteed by the project. Further, to help the producers of organic cotton – most of whom are illiterate – to organize themselves, a great deal of attention is spent on developing education methods and training programmes through innovative programs like the Farmer Field Schools (Verhagen, 2004). Helping organics is also helping larger goals of sustainability, public health, and small farmer development.

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